MAR 7 1921

Medical Times

A Monthly Journal of Medicine, Surgery and the Collateral Sciences

Published by THE MEDICAL TIMES COMPANY at 95 Nassau Street

VOL. XLIX., No. 3 NEW YORK, MARCH, 1921 Twenty Cents a Copy Two Dollars a Year

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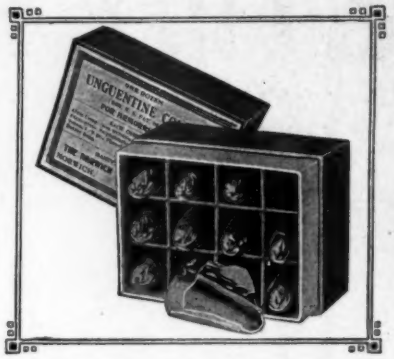

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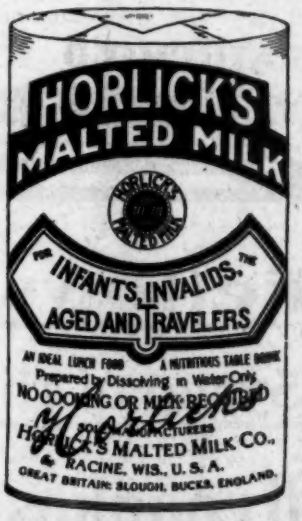

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Medical Times

A Monthly Journal of Medicine, Surgery, and the Collateral Sciences

Vol. XLIX., No. 3 | New York, March, 1921 | Twenty Cents a Copy Two Dollars a Year

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General Scientific

DO DOCTORS ADVERTISE?

P. CHARLES GREEN, M.D.,
Philadelphia, Pa.

If you were to ask this question of the average practitioner of medicine, he would answer promptly, "Most certainly not." In so answering he would believe that he had said the last word on the subject and the only word that could be said. The laity also believes that reputable physicians do not advertise themselves or their works under any condition or circumstance. What the doctor would really mean by his reply is this,—that reputable physicians do not extol their professional virtues nor insert their business card at so much per agate line in any public periodical. What he would fail to comprehend in his answer would be the fact that such advertising is in reality only one division in the great and constantly increasing field of publicity. The mere insertion or printing of a card of a man's business or profession belongs to the primer days of the craft.

Advertising and the knowledge of advertising methods has progressed in its way as far as medicine in the same time. The advertising of yesterday has merged into the publicity of today. Advertising and publicity are often used synonymously but the term publicity has come to mean and to cover the whole field of exploiting endeavor.

Publicity is a mental force which seeks to influence the choice or judgment of the individual.

Under this definition the half page scarehead of a merchant's fire sale and the automobile of the successful doctor could be jointly classified, only under separate headings, differing in degree but not in kind. You will think immediately that a doctor's automobile is most certainly not a mental force though it may serve as an advertising medium. Ah! but it is.

For before the doctor buys his machine, it is only a figment in his mind and *after* the purchase it *creates* mental impression in the minds of many who see it. The doctor considers many things in this purchase. The value of the car in time saved, ease of operation, its comfort, and pleasure are personal. On the other hand, he considers the automobile as a medium of publicity in giving ocular demonstration of his success, his progressiveness, his alertness. He may not reason the matter out in just this way, but the results are the same. The power of the machine to attract attention, to stimulate prosperity, to please his patients, to give him added dignity, to influence the neighbors where he stops, to keep him in the public eye, to keep pace with his competitors may all have sunk into his mind subconsciously, but they are there and have been instrumental in creating the desire of possession.

We can see by this that publicity is by no means or matter of fact confined to the use of white space and printer's ink. When a doctor is recommended by a friend and the reasons given therefor, the doctor is given the benefit of the strongest kind of an indirect advertisement: he will have subconsciously reached a point which all advertisers are striving to attain, namely, the good will of the individual.

Tracing back this thought logically, the next step would be to ask: "How is the patient influenced in the choice of his physician?" That he or she was influenced by some expression of the doctor's qualifications is certain. That it was an intangible expression does not alter the fact that it contained the germ of publicity. Being a testimonial that was disassociated from the advertised had the immediate effect of increasing its potency many fold. As a matter of truth, the direct advertisement usually seeks, but to set the indirect ad. in motion.

It is a rare advertiser who could afford to pay the publishers of *The Saturday Evening Post* $3,000 per page for the actual money returns directly traceable to a particular advertisement. The average advertiser buys space in the hope that he will reach purchasers who will *like* his goods and recommend them to their friends. If they *do not* like his goods his advertising never can be made to pay. He knows that it is the *indirect* advertising which the satisfied buyer gives through his free good will that will ultimately bring him his profit. Hence the truism that a satisfied customer is the best advertisement.

For fear the terms "direct" and "indirect" advertising may not be entirely clear it will probably be well to elucidate their meaning. The direct advertisement is the ad. which appears on its face value and is instantly recognized as such. The indirect advertisement appears disguised as something else and makes its appeal by sug-

gestion. The truth of the strength of indirect advertising can be aptly illustrated by the financial success achieved by concerns who use the news columns.

The great particular point in the indirect style of advertising is that it must directly link or connect, or suggest the name or the product that is to be benefited. It would thus be clearly apparent that the publicity (consciously or otherwise) employed by some doctors is the indirect method. In advertising of any kind one of the most important things to consider is your medium of expression. In the recognized advertising field these mediums may be magazines, newspapers, circulars, letters, salesman, electric signs, novelties, street cars, press agents, publicity promoters, second vice presidents, and many others.

The doctor's mediums of expression form a very interesting study. A study it must be perforce because the said mediums have never to my knowledge been classified, or recognized, or even admitted to exist.

One's first thought is, naturally, the newpapers. They are cheap, widely read and possess a direct local influence. The great part of a physician's work is also local. Wherein do the newspapers become a medium of expression for the doctor? In this respect I kept a careful record of medical men and medical matters that appeared in the Philadelphia newspapers covering a period of three months, with the following rather extraordinary results:

Doctors' names in print	820
Special medical articles	41
Tubercular news	73
Special operations	33
Interviews and opinions	52
Medical Society meetings	10
Miscellaneous	103

The subjects of the special articles make very interesting reading:

"Should Women Smoke?"

"Is Kissing Dangerous?"

"Do Doctors Prescribe nostrums?"

"Typhoid Vaccination."

"The Illiteracy of Medical Graduates."

These are but a few of the headings. Just how far they have a legitimate news value is not for me to say. Newspapers are chiefly interested in news and in events. Men make the news and women make the events. The news value of a doctor is in proportion to his reputation and the character or position of the people he treats. The doctor, in the majority of instances, does not seek to influence the insertion of his name, his operation, or special article. He is frequently "advertised by his loving friends." On the other hand, the doctor who tries to keep his name out of print is rare indeed.

The modus operandi may be as follows: The question, "Should women smoke?" was first asked by a woman physician at a women's meeting of some kind or other. There was the usual ubiquitous reporter present and the report of the address was worth a column on the front page of an evening paper. The next morning papers mentioned the address in a cursory way and then gave the opinions of prominent medical men. The nerve specialist, the throat specialist, the eye specialist, and, last of all, the general specialist, were called upon and the little piece they spoke duly printed. How many men were interviewed and refused to give their opinion, I do not know. I am convinced that there was not one. Now each man's time and opinion *in his office* is worth from five to twenty-five dollars each. It would be impugning their intelligence to assert that they were totally unconscious of the advertising value to them of their printed opinion. A physician who is nationally known told me that he did not know a successful doctor who had reached the top without using every means of publicity that he could command.

Another group I have classed under the heading "Tubercular News." There is a fashion in disease just as there is a fashion in deformity. At the present time tuberculosis has the call. Now I do not for a moment wish to decry the value of spreading legitimate tubercular information in the newspapers or otherwise. But I do wish to call attention to the utter neglect (by public exploitation) of other diseases and sanitary matters of equal importance. The death rate from pneumonia is almost as high as that from consumption. There is this difference, that while the great white plague carries off the weak, the black specter (pneumonia) carries off the strong.

It would seem to be of greater economic value to a community to save the strong that they might fight for, and support the weak. It is, however, simply a question of relative news value. The tubercular campaign is carried on with the beating of tom-toms and the blaring of trumpets while the low miserere of the gasping pneumonia is not heard beyond the threshold of the sick house. The same is true of cancer, of Bright's, of heart disease and hosts of other maladies. The tubercular movement has exploited hundreds of doctors. Only the other day I picked up a mail order paper to meet the familiar face (half page) of a tubercular man now as well known as any patent medicine advertised.

The thought occurs: Do doctors employ press agents? I do not know. I do not believe they do. Owing to the frequency and the facility which some physicians have of getting into print, they must have some means of entrance that is unknown to the average individual. That their appearance is not left to chance or reputation is evident when my record shows one man who appeared twelve separate and distinct times in the three months. I do know, however, of grape vines being planted for the benefit of particular practitioners.

To my mind, quite the most interesting development of this study was a small card which appeared in a special edition. The card read:

Compliments of Dr. ———

That was all it said, but it said it in the regular paid advertising column. The physician in question is a man who stands very high in his profession. He is a professor in one of our colleges; a man who is as competent and well equipped as any physician in his town. Just how the card came to appear I do not know. Whether it was given simply as a favor to an advertising solicitor or whether it is the flag of a fearless pioneer, it is impossible to say. This little card assumes importance because the history of advertising shows that such a card, with the name, address and business of the advertiser has invariably been the first step in the ladder of publicity. All living things must grow from a seed, and he who sows and he who reaps may be separated by a decade of progress.

In the early days, advertising was extensively used by the charlatan and pretender. The first big advertisers were patent medicine men and P. T. Barnum. In those old days to catch attention and to make sales many false statements and extravagant claims (to say nothing of downright fraud) were ofttimes made. A sane, safe, conservative profession, such as medicine, could have nothing in common with such men and such methods. Advertising of those days did, however, produce new results in a new way. It was then employed by reputable business men who soon recognized a new force and a new help and who set out to adjust it to their various businesses. As in all things, the frauds soon over-

reached themselves and became so palpable that a movement for their elimination began which has existed to the present time. One of the very first things the reputable magazines of the country did was to throw out all patent medicines, get-rich-quick schemes, and any other advertisements which they had reason to believe dishonest or unfair.

The decent advertising of the country is as clean as the decent medicine, yet a certain ultra-conservative element of the medical profession holds the very word advertising in holy horror. It is this near-sighted austerity, which resists the broadening influence of progress and growth and denies the existence of that which is so plainly evident.

A case in point is interesting. Some years back I shocked a committee of prominent medical men into frozen silence when I made a proposition that the cost of a local medical history, which was in prospect, could be defrayed if a special pamphlet edition with fifty pages of censored advertising were printed and circulated to the local medical fraternity. The point in view is this: I know that almost every member of that committee was the beneficiary of some form of publicity. One was featured in a full page spread of a New York newspaper as an obesity specialist, another had recently been delighted with three special articles in a prominent weekly, a third was receiving the benefit of a most unique and personal advertising campaign by his book publisher. All but one member of that committee suffered from publicity amblyopia. It was the scarlet word "advertising" that got their goat; all the while the little nanny was tethered to their chair in plain view.

I do not for one moment decry the literary activities of these gentlemen. I envied them. But if my vision was to be so myopic that I had no perspective and no sight of relative values, I would feel that I had lost indeed. I would rather play outside the cloistered gates and use a bean shooter to make the gods jump once in a while, just to see if their visceral psychology were as stunted as their mental.

"Office Equipment."

It is obvious that a doctor's office equipment does not suggest a broker's place of business. It is not so intended. The doctor's office equipment can be made of very great publicity value to him, and it is. If one goes into a doctor's waiting room and hears from his inner office a sound that is a cross between a stage storm and the blowing off of an exhaust pipe, there is no need to be told that his static machine is at work. It makes a great impression, and not a thing is felt. Ideal combination. The machine in itself is big and impressive. The consensus of practical medical opinion is that outside of the psychic effect, it has little therapeutic value.

While in the doctor's office, the eye may be caught by the compressed air apparatus. If he has one, it is sure to be in evidence. It is an elaborate affair, comprising a highly nickeled, cylindrical tank of varying size, topped off by a coronet of bottles containing solutions of various kinds. The tank contains the compressed air, and the eye is fascinated as it follows the hands of the dial which indicate the pressure. The solutions which are inhaled or sprayed are always of a highly fragrant character. The patient is duly impressed. The patient does not know that the same solution used in a dollar hand atomizer or nebulizer would be just as efficacious! It would.

Again, the doctor may have gone in for the electrical game. In this respect, light therapy and vibration are prime favorites. Incandescent lamps of 100, 300, 500 candle-power are used. Many and variously colored screens are employed. Patients sit docilly, and have the light played on them. What happens? Usually nothing of a tangible nature outside our old friend, psychic effect.

It is only fair to say that for all this apparatus certain things are claimed and certain effects are apparently secured. Some doctors report splendid results, others have given them up after an extended trial. It is certain that in these machines two and two do not always make four, therefore they are inaccurate; and, what is more, as they do not do things by rule and regularity, they are unscientific. I am absolutely satisfied that the machines would be in very few doctors' offices were it not for their advertising value.

The doctor has learned that many people are impressed by externals—by what they see, by what they hear, by what they feel. He has also learned that the larger and more intricate the apparatus the greater the mental effect. The average individual does not think, he simply acts on his impressions. Hence the power of mental suggestion. Just as air rushes into a vacuum so do impressions rush into the mind. If people absorb sickly impressions into an otherwise idle or overwrought mind, it stands to reason that their feelings are very likely to be so colored. If a machine with a doctor as its engineer removes them, then he is the man to acclaim. If an osteopath rubs the ailments away, they will publish it to their friends. If a Christian Scientist wills the vapors off give the credit to the Lord, but deal with Him only through this particular agent.

In the face of all this, why deny the power and necessity of professional publicity? Without publicity, any man in any profession would starve to death. The doctor in good standing in his society will tell you that the code of medical ethics says he must not advertise. If what I have said are facts, how is he going to prevent himself?

The code is the mummified bugaboo of American medicine. It is now observed in the breech as far as many of its rules are concerned. It is still held in sacred regard by "the man who stood still." So great is its fetishistic influence that it still holds "control" of the official body. It is why many progressive doctors resort to subterfuge and evasion to get and to keep themselves before the public. The doctor not advertise? Why, he radiates publicity—his appearance, his dress, his personality, his education, his ability, his experience, his course at Vienna, his internship, his automobile, the style in which he lives, the result of his cases, yea, even his wife, all, all proclaim him to any who may need his services.

Last but not least in the question of medical publicity is the matter of hospital and collegiate connections. The publicity value of these cannot be overestimated. The big plums are the major professorships in the principal medical college and professional departments of the universities. The perquisites of these positions are authorship of text books, consultations, operations, private sanitariums, and the crowded waiting room. With the growth of the university idea, this field is growing narrower and narrower. The sum of the independent medical schools is fast setting, to rise again on a new and brighter day. It is not with the idea of catching the reflections of this sun a little earlier, that I have polished off the handle of the doctor's door. It is rather to open it, that the doctor may look out into the great outside world and by letting the sunlight in, may perhaps get a new reflection of himself and his life.

Strange to say, after taking stock of what I have written, and taking stock of some of the busiest practitioners I know, I find that I have written myself into a somewhat paradoxical position: for these busy men

drive their own small cars, have plainly furnished offices, ande are so occupied that publicity is the last thing they think of, unless we remember the Freudian conception of action, revealed through the "unconscious." Medicine does not differ from commerce in the fact that it is the product that needs to be advertised. The public is interested in the individual only to the extent of what "I" can get from him. The big question with physicians is: What do we seek to get from our work? What do we seek to produce? What do we produce?

Of the qualities that the doctor *does not* advertise, loyalty, devotion and self-sacrifice are but a few. Doctors have long hours and relatively poor pay. Few die rich, none die opulent. The general practitioners everywhere, in the country and in the town, of every school and of every practice are the real brothers of men, who, following in the footsteps of the Master, enter the homes of the land to bring relief and comfort and who take therefrom as their chief recompense the gold of children's smiles and mothers' gratitude. Is not that worth while, ye seekers of earth?

2660 North 16th St.

EMPYEMA, SURGICALLY CONSIDERED.

A. Wiese Hammer, M.D.,

SURGEON TO THE AMERICAN HOSPITAL FOR DISEASES OF THE STOMACH; INSTRUCTOR IN ANATOMY, GRADUATE SCHOOL OF MEDICINE, UNIVERSITY OF PENNSYLVANIA, POLYCLINIC SECTION; SURGEON TO THE PENNSYLVANIA RAILROAD.

Philadelphia.

Empyema is always to be regarded as a serious condition. The older theory (and in medicine and surgery, what is new to-day may be obselete a year hence) defined empyema as a collection of pus in the pleural cavity, more or less encapsulated. That definition has always been regarded as satisfying the condition, whether the purulent area was or was not caused by the presence of pneumonia, tuberculosis, mediastinal disease or as a result of a penetrating wound.

In the light of present-day knowledge, however, a new interpretation has been placed upon the nature of empyema. No longer is it considered intelligent surgery to declare that an empyema is an empyema and that all that remains is for the surgeon either to aspirate or to determine upon the best possible operation for the alleviation or the cure of the condition.

The experience gained throughout the great war and the views expressed by physicians and surgeons, indisputably proves that our conceptions of this grave condition were at best not well understood, but that the proper understanding of the subject includes the nature of the antecedent disease, the character and the virulence of the microbic infection, the nature of the prevailing climatic condition and whether the disease is encountered as a single or sporadic case, or as an epidemic affection attacking vast numbers, as was noted so recently in the cantonments and around localities where there were assembled thousands of men, and where the condition was so very prevalent.

The outbreak of influenza in the autumn of 1918, developed later as a sequel thousands of cases of empyema, dependent upon an intervening bronchopneumonia. At first it was the routine practice to drain, and at the same time to prevent an acute pneumothorax. Others more conservative, regarded the exudation of fluid as of little concern, allowed Nature to pursue her course until the virulence of the pneumonic invasion had subsided and adhesions had walled off the accumulated fluid, in the meantime having resorted to aspiration.

One thing became conspicuously apparent. There were to be recognized many factors concerning each of the cases of empyema. One hundred cases may have shown the same type, the same causes, the same laboratory findings, the same course; but a group of ten other cases may have shown widely divergent characteristics. Hence, all cases of empyema could not be treated alike; what would cure one man would kill another.

And so it is in civil cases. Heretofore these different varieties of the same affections have been, unhappily, disregarded. Only recently have we seen clearly the condition in a different light and today we group many of these cases under different headings and deal with them according to the predominant factors instrumental in the production of the effusion.

Thus, the purulent exudate usually but not always contains bacteria. The exudate usually contains the diplococcus of pneumonia and, according to most authorities, in 50 per cent. of the cases a pneumonia is associated; the diplococcus of pneumonia may be present and yet no pneumonia be evidenced. The streptococcus is the variety oftenest found in suppurative pleurisy independent of pneumonia, while the staphylococcus is only occasionally found.

These statements are introduced in order to strengthen the assertion that an empyema following a lobar pneumonia does not conform in its characteristics with an empyema following in the course of a bronchopneumonia and that a pneumococcic empyema differs in many ways from an empyema of streptococcic origin. Every case must be carefully studied from every angle. There is no treatment for all cases. There is no "best" treatment. As a consideration of the different types is more a medical than a surgical matter for discussion, I briefly pass to the more pertinent consideration of the surgical measures invoked in the treatment of empyema.

These may be tabulated as treatment (1) by aspiration; (2) by the open methods; (3) by the closed methods.

The method by aspiration finds its greatest value in cases of pneumonia in withdrawing the infected fluid early in the progress of the disease, until the pulmonary process has subsided. Removal of pus by this method has occasionally been successful in late cases of pneumococcus empyema after the fluid has presumably become sterile by the death of the organism. This line of treatment, however, is only to be considered a temporary expedient, as in nearly every case it will be found necessary to be followed by more radical measures and that valuable time is lost by the delay. Sight must not be lost of the fact that the insertion of a trocar into the lung cavity in cases of pleurisy is more likely than anything else to produce an empyema. It has been truly asserted that if 50 per cent. of cases of empyema are pneumonic in origin, the percentage caused by dirty needles and rough attempts at aspiration must almost be as great, the result of faulty minor surgery.

The open methods comprise the intercostal incision and resection of a portion of a rib. By either of these means a drainage tube is inserted and the pus given free exit. When the pus lies free in the pleural cavity, the opening is best made in the midaxillary line, about the eighth or ninth space; when the collection of pus is localized, the opening should be made over the center of the focus. In all emypemas it is a part of wisdom to aspirate before making an incision and not to open the cavity until the purulent mass is accurately localized. Just as soon as the cavity is opened, the drainage apparatus is secured, a large gauze and cotton dressing is applied and held in place by a chest-binder. In favorable cases removal of pus is usually followed by improvement in the symptoms.

The open methods have much to commend them. The operation may be performed under local anesthesia,

either at the hospital or at the patient's house. No special apparatus is required and the patient may change his position in bed as best suits his comfort and he may leave his bed as soon as his general condition permits.

Extensive thoracoplastic operations are not to be encouraged except in unusual cases, and this remark, incidentally, brings into consideration a few words relative to chronic empyema. We dismiss the occurrence of this unfortunate condition with a word of admonition directed to the surgeon, when we emphasize the statement that in the vast majority, the occurrence of chronic empyema may be due to inadequate drainage through a too small opening, whereby the pus is dammed back into the cavity, reinfection takes place and thickening of the pleura is an inevitable result. Another cause of chronic empyema is an improperly placed drainage tube, one not at the most dependent part of the collection. A very common cause of this condition is too early operation, allowing the lung to collapse before sufficient adhesions have been formed. Hence, the necessity of waiting until the pneumonic attack has more or less abated, and the fluid has been walled off.

Dr. George R. Fowler,[1] of Brooklyn, was the first, and not Delorme,[2] to call attention to decortication of the lung as the best procedure in attacking cases of chronic empyema. It is indicated in cases where the lung fails to expand after adequate drainage of the pleural sac.

The operation consists in stripping the firm fibrous envelope from the surface of the retracted lung and allowing it to expand and fill the pleural sac. After a rib resection or by means of an osteoplastic flap, an incision is made through the fibrinous exudate on the surface of the lung and the membrane stripped from its surface. The operation has given flattering results in the empyemas of children and in instances of adults where sufficient time has not elapsed for interstitial changes in the lung tissue to have resulted, thus hindering expansion. Many other operations have been devised and extolled for the operation of thoracoplasty, whose object is the obliteration of the dead space between the retracted lung and the chest wall, thereby bringing about the healing of an obstinate chronic empyema or sinus cavity. In this conection we merely mention the thoracoplastic operation of Schede as applicable to extensive cavities and tuberculous cases; that of Estlander being more adaptable for smaller cavities.

The closed method in the treatment of empyema has its advocates and its opponents. Both the open and the closed methods have their uses and their places. As was remarked earlier in this paper, all cases of empyema are not to be treated alike, hence in some instances, the closed method; in others, the open method should be the choice of procedure.

The closed methods are the continuous and the intermittent. These methods have never become very popular among surgeons, no doubt due to the fact that drainage has often not been adequate and, again, because of the inability to dispose of large clots of fibrin.

Among the arguments advanced against the closed method are these: (1) That with improvements in the technic and a clearer understanding of the pathology of the affection, such methods are not necessary. (2) That most forms of apparatus are entirely too cumbersome, with likelihood of displacement of the drainage tube. (3) That a surgeon should not work in the dark, and that he is left to surmise the presence or absence of a purulent sacculation.

The advocates of this method emphasize the following advantages: (1) That in the initial stages of a pneumonia where the presence of fluid militates against the welfare of the patient, this method is the choice *par excellence*. This constitutes the surgeon's "waiting" stage. (2) Its advantages are self-evident in instances of pyopneumothorax and in double empyemas. (3) That with some simply devised apparatus, depending upon the ingenuity of the surgeon, the tube is kept in place and the cavity is effectively drained and the higher mortality of the open methods is thus prevented. The danger of a sacculated empyema remaining, is obviated by routine resort to the *x*-rays in connection with drainage of the pleural cavity.

In illustration of a simple apparatus, among the many known to surgeon, we mention that of Bryant, who aspirates the chest by means of a bulb attached to a drainage tube. The latter fits the opening in the chest and reaches to the bottom of the purulent collection. Near the attachment of bulb and tube is a stop-cock, which allows of detachment and emptying of the bulb without admitting air to the chest. The apparatus is strapped to the chest-wall, and secured in place by dressings and a binder.

From this brief resumé of an all-important subject, it is plainly evident that there is no particular operation that is applicable to all cases of empyema. In some instances, aspiration has been productive of the happiest results; in other instances, this minor procedure is not only not indicated, but absolutely harmful. In some cases, the open and in other instances the closed method is the choice of the skilled and farseeing operator. At times, the operation is done to save life; at other times life is not menace, but some method is to be devised to get rid of the infecting material and to prevent deformity. During the recent great war the number of empyemas reported was enormous, and the subject received special consideration and a better understanding, because of the uusual nature of the bronchopneumonias following in the wake of the then prevalent influential symptoms, and of the great number of empyemas, atypical, to say the least, that formed terminal affections.

It is the consensus of surgical opinion that the resullt of operation are better in children than in adults. That operations for small collections of purulent effusions offer better results than where the collection is large. That operations are more successful in recent than in old cases and that the prognosis is more encouraging in pneumococcus empyema than in the empyema due to other organisms.

218 S. 15th Street.

[1] *New York Medical Record*, Dec. 30, 1893.
[2] *Gazette des Hôpitaux*, 1894, No. 11.

THE SPECIAL SENSE ORGANS AND THEIR REGULATIONS.

Measures For Enhancing the Efficiency of Sensory Functioning in the Mature Adult.

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My purpose in invading the domain of specialists in disorders of the sense organs is merely to direct attention of those at or beyond middle age to the value of preserving and amplifying their efficiency by adding to their knowledge of environment, and thus fortifying, saving and enhancing their endowments. This is to be achieved by familiarizing themselves with a few points, such as those here offered, and by watchfulness and the avoidance of error in conduct, habits, tastes, behavior; and especially by submitting to examinations once in so often.

Above all should each one become a fair judge of one's own capabilities, margins of safety, also when in doubt, always to seek and abide by expert advice. It is desirable for one to learn how to recognize

slight deteriorations in sense organs, in diminutions of sensory acuity and endurance; also to have expertly determined whether these are due to developmental faults, to over-stimulation, which induces stress or fatigue of a center, or of a nervous or blood glandular mechanism. Exhaustion of sensory centers is almost as serious as disease; it is often far more disabling. A grave necessity is to recognize any evidences of beginning sense organ disorder or disease. Under the caption, "Perils," will be found a few salient points mentioned on those sensory disturbances which are common toward middle life.

It is no part of my intention to either offer instruction to specialists, nor to suggest that lay persons shall do otherwise than make fullest use of them. Oftentimes a precious special sense organ may be saved by becoming aware of the earliest incidence of trouble. Some evidences of functional subsidence are due to the natural progress of developmental phases, to epochs in normal evolution. When corrective measures are promptly applied the individual becomes practically as good as new, at least for a fair period. Then again these phenomena may indicate the origin of insidious disease, which must thus come under adequate conservative or reconstructive measures.

Some recommendations are here offered to show what, and how much, can be done to forefend from disaster by exercising common sense self-regulation in the light of well attested knowledge of what to be vigilant for, and how to proceed after getting the best expert advice. One's sensory powers are in almost every instance capable of decided betterment, ampification and elaboration by learning what one possesses of equipment, stock in trade, also what latent powers can be made more available through developing attention and precision.

The life of relationships is established and maintained by impressions received through the organs of special sense. All we can learn, and feel, and know, comes to us by these avenues. Experiences are thus acquired and multiplied. Education, elaboration, proficiency, grows first by the amount of information we can get through observations from without (percepts), and second by the intelligence we are able to supply in interpreting them, and third by appropriation and application; the use we make of the facts gathered. Percepts are referred to the brain and centers; hence it is the brain and central nervous system which thus becomes educated and trained. Mental and physical training is one and the same enterprise. We may visualize two kinds or phases of consciousness: the cellular and the cerebral, one of the body and one of the mind.

Obviously it is highly desirable that the integrity of these sense organs and their accessory parts, as well as their functional competence, their working efficiency, shall be maintained.

The first objective, purpose or obligation of life, is its preservation. To this end the integrity of the senses is absolutely essential. The second objective is to attain. or to retain, accurate use of sense organs. Original precision in observation is one thing, and quite another is method and quality of determination, of action, of habit formation, of intelligent self elaboration. Especially is self qualification essential to achieve right conditions of living in order to maintain, or bring back to normal, these instruments and avenues of information if, or when, impaired, ill used or wrongly employed.

*In order to do justice to this subject one would need a fair familiarity with physiologic psychology. Hence see Ladd and Woodworth. Pages 297; 486.

Only a few practical hints can be given here on points with which all should become familiar and remembered. The subject will be presented in greater detail elsewhere.

The primary senses were originally considered to be five in number: sight, hearing, feeling, taste and smell. Now the number of the senses recognized by the psychologist is in the neighborhood of eighteen. Also there are manifold finer sense differentiations, total about three hundred. Each is regarded as an elementary sense, with special end organs conveying sensory currents to the brain. "Feeling" (or touch) is differentiated into elementary sensations of pressure, pain, warmth and cold. Closely allied to this group are the kinesthetic or muscle sensations, evolved during muscular activity. There is also common sensation, coenesthesia, a general awareness above and beyond what can be learned through the percepts. High degrees of this is a valuable endowment contributing much to common sense, or balanced judgments.

The kinesthetic sensations are conveyed to the brain by sensory nerves found in muscles, tendons and joints. These are felt in the arm as one lifts a heavy weight; they are experienced chiefly in the fingers and forearm as one clenches the fist; they are detected in the lips and tongue during speech. The organic sensations (as in the abdomen, the heart, the reproductive organs, etc.) may be included as further subdivisions of "feeling." They consist of sensations from within the body itself—feelings of hunger, of desire, thrist, nausea and sensations flowing from the respiratory and circulatory systems.

The static sensations (of support, of balance, of position in space) report upon the movements or situation of the body as a whole.

Sense impressions are to be estimated (or evaluated) first in respect to the condition of the sensitive avenues, the organs whose parts are designed especially to gather and transmit them to the brain, and second as to the condition of the channels by which they are transmitted (through the nerves) to the brain itself.

We may add to the group of senses—chiefly to point out the error of regarding them scientifically—such colloquial phrases as "the sense of proportion," which may be regarded as correlated to the senses, an awareness of balance, of symmetry, etc.; also we say "the sense of humor," and other phrases which may indicate a relationship with general sensations (coenesthesia), or awareness.

Sense organs in their primary make-up consist of elaborated structures, i. e., special cells which are sensitive to one or other particular kind of influence or stimulation. The sensory cells are, after all, much alike in shape and size, also in their nervous and vascular connections and associations.

These sensory cells are long, formed like a banana, one end being attached to the receiving agent and the other to the nerve, which passes the energy on to the interpreting organ, the brain. The cells of any one sense organ are sensitive to one kind of impression and not to others, whereas cells of another special sense organ respond to a different kind of stimulus.

For example: cells of the eye are sensitive to light and not to sound; the cells of the ear are sensitive only to sound and not at all to light.

Sense organs are generally supposed to be marvels of perfection. Unfortunately this is not altogether true. Not only do individuals differ marked-

ly, some being far superior than others in original make-up, in development, in differentiation, in elaboration, but also they vary in respect to degrees and kinds of impairment, suffered from the earliest years up to the present. Here comes in the question of possibilities of prevention and of conservation, which will be applied to greater advantage as intelligence advances.

Individuals also vary as to their sensory responsiveness, as to how they are affected by, or react to, impressions. For example: one person depends more on excitations received through the eye; another through the ear; another through the nose, or the touch, or the taste, or the skin. We say one is "eye minded," another 'ear minded," "touch minded," and the like. This brings us to the subject of varying degrees of individual sensitiveness or hyper-sensitiveness; one individual being over-responsive to irritation through the sense of sight, or of hearing, or of smell, or of touch, skin, or the muscular (kinesthetic) sense. This state is not so much one of weakness as lack of poise. Hence training will go far to re-establish equilibration.

However hyper-sensitiveness is relatively independent of any determinable error or defect in the sensory mechanisms. It may be rather a higher capacity for pleasureable feelings on the one hand, or of painful ones on the other.

These sensory experiences embrace and elucidate a vast range of delights, also of disorders and disablements, such as vague miseries, pains, headaches, nutritive disorders, and thus on through the whole gamut of neuroses and psychoses to plain unbearable offensivenesses of disposition or temperament. Today eye strain is pretty well understood and appreciated, and for forty years or more, yet by no means so generally accepted as they deserve. Strains affecting the organs of sense due to malformation, maldevelopment or misuse, afford avenues of serious leaks in the fountains of force, hence they cantribute to unclear or to exhaustion states.

Personally I come in contact still with many well informed and intelligent individuals, who cling to the belief that it is unwise to submit to having their eyes examined, or to co-operate by wearing glasses. They allege as the reason a fear that glasses may injure their eyes, may weaken them, may interfere with the processes of nature. This is a fatal economic blunder for the reason, amply demonstrated, that any refractive defect in any eye (error of conformation, the diameters being over long or over short, or irregular through a slant in the sphericity), as well as that any anomaly in muscular balance or control, must prove a serious strain on vital force. Omission to submit to correction, by glasses or otherwise, leads necessarily to serious impairment not only of the eye itself, but also (retroactively) of the whole organism, through the vegetative functions, by way of the nerves and brain.

No one can afford to neglect so pivotol a point in the scheme of proficiencies, or happiness, as to omit safe-guarding and conserving the organs of vision at any age. Particularly is this true for those who are at, or near, the period when cellular deterioration inevitably begins. While it is true that blind persons do achieve a marvelous measure of compensation, this is true only for the compartively young. To lose acuity of vision in middle age, after the period of plasticty, of adaptability, has passed, is a calamity. Not only so, but the use of glasses as Gould has demonstrated, materially lengthens the period and enhances the productivity of working powers.

Re-Education or Self-Regulation of the Sense Organs.

Specialists in diseases of the eye, nose, throat, ear, etc., to whom has been submitted my purpose of saying something in this book on education of the senses, tell me that little or nothing can be done other than to correct or repair recognizable faults, or remove handicaps in the organs, or to supply mechanical aids except, e. g., through glasses for the eyes. My own impression is that much of importance can be achieved by judicious self-regulatory or self-training measures. The topic has not yet received adequate attention from the standpoint of energy accretion.

The healthfulness or integrity, hence the efficiency of a sense organ depends in large measure on: (a) local nutrition, innervation, circulation, etc., and upon: (b) constant, well directed use, i. e., exercise of function, through concentrated attention and application, also on: (c) functional action and reaction, which helps much in maintaining sensory acuteness and proficiency, as well as organic competence.

The consensus of opinion among experts in physiology, in psychology, as well as in diseases of the organs of special sense, including the many aspects and varieties of touch (tactile or kinesthetic) sense is to the effect that: "The appreciable and tangible results from sense training is not the perfection of the physical organs, but an adaptation and a specific development of the intelligence." (Prof. A. Herlein quoted below.)

Here offers a large and promising field of self-betterment, well worth the effort of any person who becomes aware of sensory limitations or defects in power of concentration. Whatever enhances sensory acuity makes for amplified efficiency and proficiency, hence of intelligent apperception, industrial proficiency and also the prolongation of years of usefulness.

Let me here append a pertinent quotation from a translation by Flora E. Otis, of the Vineland School for Backward Children, from Prof. A. Herlein, of the Institute of Deaf and Blind, at Berchem, Sainte-Agathe, in a "Conclusion Resume," in an Italian work, "La Educazione die Sensi," by Evaristo Marsili.

"He further says (Herelein) in the nature of conclusions: (1) in ordinary language the term 'sense' embraces several meanings as (a) impressionability of the peripheral organs; (b) transmissibility of the stimulus; (c) nervous excitation and its propagation; (d) consciousness.

(2) "It is unlikely that impressionability and excitation, which are inherent in the peripheral part of the organs, and to which, in common usage, constitute the essential elements of sensibility, are really educable, that is to say, that one can increase and perfect their functioning to any degree beyond that which would come about through the spontaneous development, especially after the first years of life.

(3) "There remains consciousness, which is *'L'activité educable par excellence.'* Consciousness of sensations alone is not, however, different from that of memory alone, or of reasoning alone, or of will alone, since it is the principal, if not the only, function of the mind.

(4) "However, if it *is* possible to bring about an improvement in fundamental sensibility, excitability, and transmissability, assuming these to be organic functions, the realization of their improvement is more a prophylactic than strictly a pedagogical (educational) problem.

*An interesting and valuable controversy has been actively waged of late between certain clinical experts as to the significance of disorders of the eye, as compared with those of other organs. The great proponent or apostle of the eye as the governing agent in a variety of decrepitudes is Dr. George M. Gould, who has circumambiated the wide realm of biography and offered convincing explanations of the ill health of sundry conspicuous persons hitherto unsuspected of defects in their eyes. Extremely instructive his views are and ably sustained, though of course challenged. It is always the enthusiast, and above all the expert enthusiast, who illumines a special domain of science or experience.

"Sense training measures are now generally stated to accomplish little or no more than, as Prof. Sarite di Sanctis says that: 'Auricular exercises in cases of partial deafness do not improve the receptivity or the auditory conduction, but serve only to develop the attention.'

(Remarks of Prof. S. di Sanctis in accepting certain radical conclusions of Prof. Colozza.)

"Also Prof. Romagnoli who, himself blind, asserts from his experiences, that if there really are compensations they are mental and are products of voluntary attention."

For those in the middle or later stages of life who have lost, or apparently lost, more or less acuity of vision, of hearing, of the sense of touch or smell, or other sensory precision, it is reassuring to learn how far, and in what direction, hopes of betterment can be entertained.

A review of the evidence seems to justify me in the following conclusions that:

(1) Much is now capable of being accomplished through making adequate use of the researches, experiences and devices of modern medical science, designed to overcome the pathologic defects of the senes organs; also that much progress is constantly growing. Individual experts oftentimes attain such special skill in one or another of these departments, or particularized aptitudes, that some one of them may be found who can supply what any individual especially desires or needs, and:

(2) That so highly capable of differentiation and training is the consciousness, with its diverse and wonderful avenues of impression-ability, that many seemingly insuperable primary defects, difficulties, or acquired impairments of sensory acuity, can be overcome.

There are now on record instances of almost miraculous recovery of lost, or apparently non-existant, sources of apperception as to warrant yet further expectations.

For illustration, we have Helen Keller, Laura Bridgeman, and now many others.

As to the argument for being able to bring the peripheral sense organs to the highest degree of perfectability, it is shown to be possible by many facts, as, for example, the following: One who is accustomed to observing through the microscope at first has difficulty in seeing living typhus bacteria, which are whitish and almost transparent, easily lost sight of in the water in which they move or float. And yet these easily become seen by an eye which is trained to microscopic observation. Hence the beginner, after a few trials, passes rapidly from partial or inadeqaute vision to a greatly enhanced capacity for accurate vision. Such instances can be multiplied and are illustartive of the power of acquired differentiation, development and elaboration in the province of all the sensory organs.

It is to be remembered that acute sensibility begins, of course. to diminish at a comparatively early age, or, at best, remains stationary. All this, too, without interfering with the further development of the intelligence.

There is considerable evidence to support this view, for many people of dull or defective sense perception, yet have superior intelligence and reach highest points of culture, whereas others of very acute sense perception do not possess particularly keen intelligence.

The intelligence seeks out and co-ordnates, "integrates," interprets and evaluates informative data obtained through the senses, and, what is more important, often resolves them, separates them into elements and avails itself of them. It is this which has brought about the hopeful belief (which is shown to be illusory), that it is possible to perfect the sense. Hence it does seem, for the sake of my plea (or argument if you admit it to be such) that it is entirely worth while to make use of every reasonable means for educating, training, i. e., self-regulating the senses.

All education of the senses has for its objectives the increase and development of the *sensible consciousness*, and the purpose of education relative thereto may be summed up as follows:

(a) To build up, strengthen, and refine observations and attention respecting the information obtained through the senses.

(b) To increase and unify the experience of such sensory acquisitions by fixing them in systems and convenient classifications.

(c) In formal exercises selected and applied, not to aim exclusively at perception as is sometimes done, but to keep in mind also imagination and memory.

(d) To instill the need of capacity for obtaining the greatest possible effect from the fewest sensory impressions, and with the greatest speed and accuracy. It is pertinent in this connection to refer to the earnest, consistent and comprehensive researches of Casper L. Redfield in demonstrating from massive evidence that characteristics acquired through persistent effort can be, and are, transmitted to offspring.

Visions and Its Regulation

The eye reaches its perfection early. Soon after birth it becomes a marvel of capacity and adaptability. Normally used and defended the eye will continue to sub-serve its wonderful purposes till early middle age, till the beginning of normal decline, at which time retrograde changes usually set in. The structures then alter, become relatively inelastic, even rigid; the media (fluid parts) less clear, and mobile; the accessory structures less competent and capable of accuracies. These modifications or deviations proceed more rapidly in proportion as the organ is abused. Occupation which compel close attention and sight at short range, and for long periods, by imperfect or artificial lighting, in short, the compelling demands and burdens of civilized life, combine to exhaust and hasten the normal processes of decline. Outdoor workers suffer less.

Primitive peoples, savages, have no such perfection of eyes and seeing as is supposed. They are, indeed, less subject to eye strain. Alternations of outdoor and indoor life are particularly helpful in putting off the evil days of visual decadence. The use of correcting glasses long postpones the period of visual incapacity. This postponement obtains especially with those whose eyes are defective in original make-up; but is true for all.

It is obvious that over-tasking of the eyes makes for early losses in visual acuity and for many other consequent distresses. Eye strain, however much it may be lessened by correction and by accurate glassing, reacts upon the nervous mechanisms of the entire body. When the brain is put to extra severe and continued over-use, to prolonged fatigue and wearying exactions, the whole organism suffers severely. One reason why the brain worker finds such refreshment and rejuvenation in outdoor life, is the relief afforded to protracted eye fixation, and to strained visual attention.

The muscles which move the eyes demand varied exercises, directing the glances over wide ranges, both up and down as well as from side to side. Also

the delicate little muscles which regulate the convexity of the lense demand rest and relaxation. Even during the day's work it becomes a vast comfort to look out of a window upon distant objects, once in so often. Consult a competent eye specialist the moment any evidence arises of difficulties or even peculiarities of wisdom.

Position of the head in relation to the object seen is obviously of great importance in economies of vision. This point is emphasized with great particularity by careful ophthalmologists. Also relationship to light, direction, quality, diffusion, must be learned and conscientiously practiced, by any one whose occupation demands constant and accurate use of the eyes in the near vision.

Furthermore, as I have repeatedly demonstrated, extraordinary betterments can be achieved in seeing, in hearing, in achieving the integrity of the upper respiratory organs, the nose and throat, by means of exercises in mobility, in pliancy of the neck.

Dangers to the Eye and Vision.

While the eye is an organ of supreme delicacy and susceptibility, of such nicety of, and paramount need for, adjustment, it is quite naturally regarded as susceptible to all sorts of offending and hurtful agencies. Many of these fears are well grounded but some of them are not. Careful researches have been made of most of the terrifying statements concerning dangers to the eye, for example, of the effects of modern sources of artificial light.

Certain facts are established which should be a source of much comfort. One is the lack of penetrating power of many effects of light beyond the outer eye. The retina may be flooded for an hour or more with light of extreme intensity (not less than 50,000 luces—a lux being the unit of intensity of light—it equals the illumination by a standard candle at a distance of 12 7/10 inches), without any sign of permanent injury. Only when the concentration of light involves enough heat energy to produce definite thermic lesions is the retina liable to be injured.

Effects due to light over-stimulation are, in the main, absorbed by the media of the eye before reaching the retina. The glass enclosing globes, used in many commercial illuminants, are amply sufficient to reduce any abiotic radiations to below the danger point. Special colored spectacles can also be used to reduce the total light to a physiologic tolerance.

Dangerous to the Ear and Hearing.

In regard to th dangers to the organ of hearing, the ear, it seems well established that notwithstanding the many dangers which assail, it is true that most perils, perhaps all, can be prevented. In short, consicous self-regulation begun early enough and observed faithfully enough, is capable of reducing destruction to the ear and also of the eye, to a minimum, to a negligible quantity. The general law of nerve organization is that a repeated or continuous excitation of the nerve center will, in time, modify that center both in function and in structure.

Especially is this true of an eye in which vision is impaired or destroyed by toxins of systemic origin. Disease is the outcome of civilization, due to ignorance or indifference or other reasons for omitting self-regulation.

Faulty dietetics, and inadequate or abusive exertions, and errors of hygiene generally are the fertile grounds for most diseases and equally of disorders in such highly specialized structures as the eye and ear. As one writer puts it (J. A. Stucky, M.D.): "We (otologists) should not know less otology but more of the physiologic, hygienic and dietetic departments of the science of medicine."

Among the perils to vision and hearing are fatigue states and their correlates, exhaustion states, with the poison products thereby engendered as well as exhaustion this excessive excitation of nerve centers and endo crime glands whereby vitality is depressed or put dynamically below par.

"A chronic realization of fatigue" in certain groups of muscles closely connected with the function of an organ, is an adequate cause of impairment in the integrity of that organ. Such effects are primarily recognized as pain. To this sensory reaction one may become accustomed; it sinks below the threshold and become a mere wretchedness, hence one tends to neglect the causes which give rise to what may become serious damage to highly specialized structures.

In the case of the eye faulty position of the head in striving to use vision brings about stresses in the muscles of the face, of the neck, between the shoulders, the back of the head where muscles are inserted and nerve centers situated in the cord. Unless errors in refraction of the eyes are fully corrected this overtension is followed by extreme distress, or visual strain or both. Even when the eye is refracted, supplied with suitable glasses, this error of attitude being continued may lead to sensory and organic disturbances capable of impairing the integrity of the structures.

In short, the cure lies in the mechanical adjustment of gross, static, postural errors quite as much as in attention to the eye *per se*. Obviously these effects will be more serious when the organism is constitutionally or senescently at fault.

DIET

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Many articles and books have been written on diet. Dietitians have told us the necessary number of calories each class requires—that is, whether following a sedentary or an active outdoor life—and how many calories each article of food contains, and about the length of time for the digestion of each article. Yet we know precious little of the why, the wherefore, the freak or idiosyncrasy of the individual digestion. Dietists and physicians would do well to remember that there are more mysteries in the digestion and assimilation of food than "are dreampt of in our philosophy."

Once an article of food is charged with being conducive to the formation of *uric acid*, it is tabooed by many physicians. It is not even held to be innocent until proven guilty; especially is this the case with many meats that are rich in nucleo-proteins, such as liver, sweetbreads, duck, turkey, roast pork, feed red meats generally. We must remember that uric acid is a necessary metabolic product of urine. When the medical profession fully realize that *uric acid* is not responsible for half of the digestive troubles that are now produced by bicarbonate of soda and the constant and prolonged use of alkali mineral waters—taken for the *cure* of uric acid—there will be less indigestion complained of and uric acid will cease to be the *bete noir* that it is now, Haig notwithstanding.

After fifty years in the practice of medicine, the writer has concluded that it is the excessive quantity of food consumed—overeating—that has caused many articles of diet to be ostracised.

When the man who called the turkey an "inconvenient" bird—as he found it rather too much for one and not quite enough for two—took mince pie for dessert after his turkey dinner, he very probably found mince pie an indigestible food that should be strictly eschewed.

Of course, if one takes a cocktail, or two, before dinner—perhaps caviare, rich soup, a few relishes, olives, salted nuts, etc., fish, one vegetable, meat or meats, many vegetables, mince pie or any rich dessert, with wine, strong coffee after dinner, smokes a cigar or two during the evening—some one article of diet is sure to be blamed for his indigestion.

The writer has had charge of the medical department of the Byron Hot Springs for three years. The ailments for which the majority come here hoping to be cured, are, rheumatism, sciatica, gout, athesoma, nephritis, insomnia, high blood pressure, indigestion, and, of course, "liver troubles and uric acid in the blood." At least 80 per cent. of these cases are the result of *over*-eating; seldom is any one article of food responsible. In many cases, alcohol and tobacco are not innocent of the results. It is a matter of common sense that $3,000,000,000 expended annually for alcoholic liquors and tobacco, and 20,000,000 cigarettes, smoked annually and 40,000,000 cigars, by the people of the United States, must prove detrimental to the physique.

There are few articles of diet that cannot be eaten once a day, and once or twice a week sparingly, with immunity. The supposed beef eaters (red meat eaters) of England, have given the reputation to England of being the land of gout. The facts are that in American, Canadian, and the Australian, eat more beef than the Englishman.

No doubt, overeating of any purin food may result in an excess of uric acid. But no dietist would claim that sweetbreads, liver, etc., eaten sparingly once a week, could possibly derange the digestive machinery to the extent of producing uric acid in excess. Excess of "uric acid in the blood" has been relieved by the charge, temporarily, at least, of being the cause of chronic articular rheumatism. At the present time, the rheumatic must have his teeth extracted, and his tonsils enucleated. But, alas, Hot Springs are still haunted by toothless and tonsilless rheumatic patients hoping to be cured. It goes without saying that diseased teeth should be extracted and diseased tonsils should be enucleated.

Of course, there is an excess of uric acid in the circulation in gout. But there is a rich man's gout, a poor man's gout and a vegetarian gout. Is it possible that in each case of gout the subject partook of a particular purin food—or was it not quantity and alcohol in each case, rather than quality, that was the responsible agent?

Eat sparingly of any food that one enjoys—never eat the same fish or meat more than two consecutive days in any one week. Never eat fish and meat at the same meal. Light breakfast, light lunch, a good nourishing, plain dinner.

It is not by faith, by pretending to ignore pain and sickness that disease is to be lessened, but by learning what and how to eat—by learning not to over-eat. It is safe to say that at least eighty per cent. of all complaints is due to over-eating of improper food at improper time. It goes without saying that alcohol and tobacco have much to do with many cases of ill-health. Over-eating of improper food, however, causes more cases of atheromasia, nephritis, diabetes, rheumatism and gout.

It is as illogical and absurd to eat the same food in summer and in winter as to wear the same clothing in the heat of summer and in the cold of winter.

AN INTERESTING CASE OF AN OTITIS EXTERNA.

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That there has been a great improvement in the practice of otology—both in diagnosis and treatment—within the last decade, only the very ignorant and the very cynical will deny, but that there is still room for improvement even the most optimistic will admit. The history of the case that I give here in the patient's own words would seem to corroborate this fact.

Miss E. B., school teacher, awoke during the night of August 1, 1919, with a severe earache, and for lack of a better remedy, applied Omega oil and a hot water bag. The pain continued for two or three days and then subsided. Dr. F., who happened to be in the same hotel was unprepared to examine the ear properly, but decided that boils were forming in the ear canal. She says:

"The following week I came to New York with a recommendation from Dr. F. to Dr. Z., an ear specialist. He opened six boils which had appeared in the lower part of the outer ear and prescribed alcohol drains. The cutting was done under local anesthesia. For two weeks 95 per cent. alcohol was applied three times daily. In the meantime I had been put on a strictly vegetable diet. I cut out meats, cereals, also candy and preserves. Not feeling any improvement Dr. Z. recommended me to Dr. McX. to remove my tonsils. He thought that the trouble in my ear might be caused by the infection of the tonsils. In September I had my tonsils removed by Dr. McX.

"The condition in my ear not improving I returned to Dr. F., who administered eighteen or twenty injections of anutgenous vaccine. The condition in the ear still not improving, Dr. F. sent me to Dr. M., who made a smear of the discharge and decided that the germ was the staphylococcus albus. He advised to take yeast (two cakes daily), and treat the ear locally. In November, Dr. F. sent me to interview Dr. C., another ear specialist. Dr. C. prescribed something and guaranteed that I would be well in three days. He assured me that the middle ear was not effected.

"Not improving from the treatment of Dr. C., Dr. F. put iodin packing into my ear on alternating days for about two months; occasionally when the ear looked too angry to invite further irritation, he applied scarlet ointment. I still continued on a diet and took syrup iodide of iron. I saw Dr. F. daily, but the ear canal was so swollen that he could do nothing but cleanse it daily and apply zinc salve when it had cleared a little. Then Dr. F. tried a mustard colored powder (the name of which I forgot); it has been imported from Germany and was selling at about fifty dollars ($50) per ounce. To all appearance there was no improvement. Then I went to Dr. W., an ear specialist. He recommended an *x*-ray be taken of the ear and a blood test taken (the blood test was negative). Being under the care of physicians as well as specialists, from September, 1919, until June, 1920, I was advised to see Dr. W., a skin specialist. He decided that it was an acne and gave *x*-ray treatment, which had absolutely no effect.

"In July, 1920, I went to Ithaca on my vacation. There I consulted two physicians, but they made no recommendation. I began to use sodium phosphate and syrup iodide of iron regularly. In August, 1920, a physician recommended an *x*-ray of my teeth and an examination by a bacteriologist. In September, 1920, I had a wisdom tooth extracted; the root was surrounded by a pus sac, and the discharge from the ear stopped

for three days. We were sure the root of the trouble was now disclosed; however, the discharge began again. Feeling very much disappointed I began to syringe the ear with epsom salt, astringent soap water and other family remedies, but it was all useless."

I first saw the patient on December 21st. Upon examination I found the concha red, inflammed and much thickened, the tragus and the antitragus very much infiltrated and hard to the touch. The external auditory canal was very narrow and inflammed. The whole length of the canal was of a funnel shape. With great difficulty was I able to convince myself that the middle ear was not involved. The canal was filled up with a greenish thick discharge, having a foul odor. After cleaning out the canal, the mucous membrane of the whole canal was denuded, raw, and very angry looking. I applied a 2 per cent. silver solution to the whole length of the canal, forming a protective coat upon the mucous membrane. I inflated bismuth powder and inserted a dry packing. The discharge from the canal stopped on the second day. The packing was kept up for four days until the entire swelling of the canal subsided. I left the ear free, using 2 per cent. silver locally and inflated the powder during the subsequent four visits which were on alternating days. I gave to the patient ung. Hg. oxidi flavi, 1 per cent., to apply gently twice a day by means of a piece of cotton on a toothpick. On December 31st the patient was discharged.

Here is a case of an ordinary otitis externa which yielded quite readily to proper treatment. Curiously enough the patient suffered for sixteen months in spite of the fact that she was constantly under the care of physicians and specialists.

The report of the case emphasizes the deplorable results which follow too vigorous treatment, or too much treatment, or a failure to make the proper diagnosis of the case and the consequent mistreatment.

616 Madison Avenue.

TONSILS IN RELATION TO EYE, EAR AND SYSTEMIC DISEASES.

HAROLD HAYS, M.D., F.A.C.S.,
New York.

It is a well-known fact, to-day, that infected tonsils are responsible for a great many symptoms and conditions, apart from those directly related to the throat. In fact, in many cases, there are no symptoms at all in the throat with the exception possibly, of the evidence of caseous material in the crypts, and a moderately enlarged gland underneath the angle of the jaw. The size of the tonsil has nothing to do with the matter. We have frequently found that the size of the tonsil is in inverse proportion to the amount of infection in the system.

In order to determine the character of the infection that is present in the tonsil, and whether the patient's symptoms may be attributed to that infection, one should not only make a careful examination of the throat, but should take cultures to determine what pathogenic organisms, if any, are present. It is the common fallacy that pathogenic organisms, such as streptococci of the various forms, predominate in all throats. This may be so if improper cultures are taken such as is frequently the case when cultures are taken from the surface of the tonsil, or from supposedly infected crypts, whose mouths are wide open. It is our invariable custom to take cultures from the supra-tonsillar fossa, and in almost all instances we have found that the plates show a predominence of one organism, which not by any means is always the streptococcus. Whenever we do find a streptococcus present—viridens, hemolytic, or mucosus —we are suspicious of the casual relationship between the tonsils and the symptoms complained of.

There are various eye diseases, particularly, iritis, choroiditis and corneal ulcers, which are often indirectly due to tonsillar infection. We say indirectly, because we feel that the infection is first systemic, and that later manifestations are found in the eye. That these can be cured by the total removal of the tonsils has been proven time and time again, but we cannot insist too strongly that one should not form the conclusion that all eye inflammations of this kind are due to tonsillar infection.

Ear conditions which result from tonsillar infection, on the contrary, are due to direct infection, or direct continuance of inflammatory reactions from the tonsils to the Eustation tube and thus into the middle ear. Many a suppuration which has persisted a long time, has been cured by the removal of the tonsils. Any number of cases of chronic catarrhal otitis media have been started by a lack of attention to an infection of the tonsillar tissues. Of course, after the catarrhal process in the ear has become well established, it is difficult to state whether attention to the tonsils will help to clear up the ear condition.

One is well aware of the number of systemic diseases that result from tonsillar infection, particularly, various forms of arthritis. In these cases, the cause and effect is well known, and we unhesitatingly say that any vestige of tonsillar tissue from which can be isolated a pathogenic organism, is in many instances directly responsible for the joint symptoms. It is surprising in how many of these cases little tonsillar tissue is seen and one is likely to procrastinate, unless he has further evidence than inspection will give to warrant his doing his work promptly. Palpation of tonsils by passing the index finger lightly over it, will often reveal an astonishingly large mass of tonsillar tissue which could not be readily seen.

2178 Broadway.

LOCAL ANESTHESIA IN MINOR SURGERY. SURGERY.

JAMES H. HEACOCK, M.D.,
New York

My aim is to prove the merits of one of our best known drugs in a particular heretofore neglected. As we all know novocain (procain) is used extensively in minor and in major surgical work. Hernias, varicoceles and appendectomies are commonly performed today under local anesthetics.

But how many physicians are there who are at a loss to open a boil or an abscess, or in fact any infection without pain? The cocain solution ½ of one per cent. or 1 per cent. formerly used, proved disastrous in many instances and though a correct technic was used, many unpleasant experiences demonstrated the danger of employing that drug.

At St. Mary's Hospital we used a 2 per cent. novocain solution almost exclusively, but later on a ½ per cent. solution has been found to answer all purposes and with much less danger attached to its administration. To open a boil or an abscess, to remove a scar after lacerations, to extract a broken needle lodged in a finger, to remove a splinter of wood from the palm of the hand, to incise and resect a distal phalanx, and in scores of like minor surgery situations, the physicians' help is in almost daily demand. Generally one has a nervous individual to deal with. The following is typical:

Mrs. T., a very nervous woman, was working in a laundry on a collar machine as ironer when she caught the index finger between the presser and the ironing

plate, completely splitting the nail and injuring the nail bed. A wet dressing of aluminum acetate was applied and the patient was sent to her home with instructions to return the next day. By this time she had mustered up enough courage to submit to operative treatment. A ½ per cent. solution of novocain was injected over the middle of the dorsam of the second phalanx, superficially; subsequently the needle was plunged deeply on both sids of the bone. Relief was immediate and the curative process seemed to be aided.

I find in my daily work, with proper technic, one can proceed to operate in from five to ten minutes after injecting the novocain solution. The area infiltrated promptly becomes whitish or blanched in appearance and in about one minute thereafter the whole end of the finger thus injected, will become desensitized; at times there will be a slight tingling up the arm. Occasionally, through nervousness, the patient will perspire profusely. About two hours after such injections the patient will occasionally feel nauseated, due to nervousness or to a slight absorption of the drug. Very few of my patients have had this experience, but the exception is worthy of being noted.

I have opened about 200 abscesses under novocain anesthesia and have also used it in every character of infection and always with excellent results. I have never had any use for ethyl chloride for anesthetic purposes, because it hardens the tissues and hinders the clean dissection necessary for thorough work; it also prevents early healing. Freeing the edges of a wound after incision is of the greatest importance for the furtherance of good healing.

The great secret in all infections where novocain is indicated is to infiltrate in the healthy tissue and not to inject too close to the infected area. For instance, in treating a boil or an abscess, I start at the outer edge of the infected point and begin with intracuticular injections, never going into an infected area. After this superficial ring is complete I proceed to make deeper thrusts with the needle, thus completing the blocking system. If there be pain after the first injection, the technic is not correct; moreover, your patient will lose confidence. Such a result shows you have worked hurriedly or have over-stepped the boundary line, or that your syringe is leaking, or that you are too close to the pus pocket, allowing fluid to leak from there out through a fistulous opening in the skin surface, thus losing the effect altogether. If the needle touches an infected spot there is danger of distributing pus with each added prick of the needle. In dealing with an extensive cellulitic area, avoid the pus containing tissues. It is important that one should know his anatomy and not plunge novocain solution direct into a bloodvessel as the consequences may be serious.

A few days ago I was called to treat an infected foot from a nail puncture wound in the sole of the foot, the nail having first gone through the sole of the shoe. One thousand five hundreds units of tetanus antitoxin had been given previously. I injected a ½ per cent. solution of novocain into the ball of the foot, then made a crucial incision to empty a pus pocket, used a curet for the slough and then applied drainage. There was no pain further than the first prick of the needle. Recovery was without incident.

Novocain powders, 5 grains each, are the handiest to carry. Each powder will make 2 ounces of the ½ per cent. solution. Tablets of procaine of various sizes are available, Metz being the most reliable; some prefer tablets to the powder, claiming they dissolve more readily. The patient whose case has just been cited, because of a weakened cardiac condition, had his appendix removed with novocain anesthesia during his service in the army. The surgeon who operated on him had done 138 major operations under novocain anesthesia; his was the 139th.

There are, of course, certain limitations when it comes to treating very large abscess cavities. In such cases it is almost impossible to block all the nerves leading to its boundaries in order to effect complete anesthesia. Case after case could, however, be mentioned in which success has been achieved, thus making the work so pleasing that it lessens the regrets of an occasional failure.

114 W. 64th St.

The Man Young at Fifty

THE ENTERPRISE OR SURVIVAL AND RE-ESTABLISHMENT AFTER THREE SCORE YEARS.—III.

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Rules of Conduct For Saving Man Power From Premature Senescence.

Counsel should be taken frequently with competent experts in human economies, in personal hygiene, in conduct and also in behavior, in adjusting vagaries of feeling and emotional tones, in control of the functions of personality. Prevention is being forcefully shown through recent historic blunders to be the most golden of rules.

After desirable examinations by real experts, appraisements made of conditions as they are, a compact should be formed between client and personal adviser. Agreements reached should then become binding, due allowance being made for suitable variants.

Even when the energy fund has been found at a reasonable level, it will often prove necessary to reduce the number and character of the complex exactions so commonly assumed. These include obligations to domestic, charitable, professional, industrial and other preferred activities, responsibilities, direct or implied, above all to absorbing ambitions, social, benevolent, political and the like. These cherished incumbencies tend to lure an energetic bearer to the output of unrealized exertions, anxieties, worries, exasperations, to the release of temper, also opening other avenues of stress and strain.

In short here lies spread out the net of tempting emotional pressures, counter pressures, always luring toward unwarranted or prodigal efforts. Under the driving of overwrought feelings, implied obligations, idealizations, the push of resolve tends to make one do in accord with undue consciousness.

One's selfhood thus becomes subordinated, personal welfare sinks into the background. The pressures caused by emotions breed problems which tend to mar one's sense of proportion in the misuse of liberties, neglecting proper duties and accountabilities. In short, one should make careful revisions, being then so nearly blind in one's sense of proportion, especially dubious whether one is doing enough, but not too much, of the right things, in the right way, always with due regard to avoiding stress, over-tension, anxiety and hurry.

Perils lurk in even the conduct of the more simple, natural, commendable doings, amusements, occupations, whether for pleasure or choice. Physical efforts are less liable to induce stress, yet even here vain ambitions may lead one into grave indiscretions. Hence also wise coun-

sel is equally mandatory in this agreeable and salutory department of physical endeavor.

As to bodily exertions, healthy exercises, they are just as necessary as food or rest or clothing or shelter. Not merely for survival either, because the bed-ridden invalid sometimes outlives the vigorous toiler. The central aim is to escape decrepitude caused by structural deteriorations through disuse or misuse.

Here we verge upon the domain of artistic welfare endeavor. In no department is art more commendable or necessary than in the evaluation of accessory circumstances or strivings, among the chief of which is the mental attitude assumed toward these situations. Note that an isolated invalid often achieves a blessed contentment, a surcease from the need for striving, from the urge of active duties, from the discharge of obligations. The self having become disencumbered of the impulse to keep in step with the social procession, sinks back into a leisureliness highly conducive to poise, equanimities, hence the elements of longevity are conserved. Likewise in these saving particulars is the invalid to be imitated by one still able to hold the reins, the plow handles, or to employ energetically the directing mind.

For the man of well preserved, or apparently undiminished powers for activity, the non-use of powers tends to react hurtfully upon the entire organism. The human body demands active use, work in accord with primitive impulse and design. Failure to obey the primary mandate to toil and sweat, spells disaster. Judgment must, of course, control the output, the character and extent of the exertions.

How shall one decide what is wise to do or not to do? Well, keep on with the more agreeable duties and release the more burdensome ones, or cut in half the onerous ones by transferring the weight to others. Of course, the decision is often far from easy, is even mortifying, but altogether feasible as experience shows. Of course, difficulties will be met, they must be overcome. Here arises the opportunity to exhibit one's art, one's superior abilities. The process is not only interesting but essential.

This story was told me by one of my closest friends, the legal adviser of a man famed in the seven seas for wit, capacity and wisdom who, while sitting at his office desk at the age of over eighty was asked: "How do you manage to survive so happily?" His answer was: "My dear boy I will gladly endow you with my secret, my 'open sesame.' It is this: in four small words lies the philosophy of a long and active life, *never take anything seriously.*" The tale was repeated to this man's intimate friend, a judge of high degree, who smiled indulgently and remarked: "Very good for the shrewd old rogue. Now he very nearly has the truth of it. He should, however, add one other word, it will then be complete; never take anyting *too* seriously." Reported back to the author of this gem, he said: "Tell H. I always did give him credit for good sense, but not good enough this time. Now tell him it took me ten years of unremitting effort to get rid of that word *'too.'*"

Of course, as one's enthusiasms fade they must be reburnished or transferred. Enthusiasm is the salt of existence, the well-spring of nourishment for all good purposes, powers and blessings and, what is more, for that loyalty which alone justifies existence.

In order to retain responsiveness, the sympathy and affection of others, the power of inspiration, the glow of buoyancy, fulness of heart, and other priceles attributes, one in late age "must walk with the young men," as Sir William Osler so earnestly advised. Seek companionship of those on the threshold of life, bask in their reflected light, render yourself worthy of their esteem. It is no easy task, but whatever task is worth doing is worth striving to do artistically and persistently. Perhaps there is no golden rule of life more free from alloy, more justifying of currency than this: stand among the good company of the fellowship of those of the household of life in order to elude senescence and gloom.

The older ones have acquired wisdom, caution, judgment; the younger ones possess the prodigal energies and all the world from which to choose. Then set forth to combine each group and you at least will be the wiser and the happier.

Shall Those Beyond the Three Score Mark Take Exercise?

Some advise that no more shall be done than merely a "plottering about" (so Woods Hutchison counsels), or by amusing themselves in semi-active fashions. The trend of professional opinion, and the tide of lay counsel, is that almost none should be taken. Especially are those emphatic in the negative who speak from preferential beliefs, easy chairs, inadequate knowledge and small attention to the real facts.

For any one physician to diverge from this supposedly safe and sane negative position of counselling stagnation, is to invite rebuke, even grave disfavor.

It is far safer to cite Mr. Punch's advice to those contemplating matrimony: "don't," and try to believe it.

Certain it is there is only one means of acquiring popular commendation and that is to shake the head disapprovingly of any exertions beyond those strictly spontaneous or imperative.

And yet I for one am bold enough to advocate, even to urgently advise that, under what may be deemed "suitable circumstances," old people shall not only "potter about" but make fairly active and systematic outdoor exertions, enough to cause some labored breathing and frank sweating daily, also in all weathers except the worst. Of course, the utmost judgment must be used and obedience to expert counsel assured.

How about those of high-blood pressure, disordered heart action, kidney disease, even "threatened opoplexy" —whatever that may mean? Well, I can point with satisfaction to results in a considerable group of elderly folk, some not only well past seventy, but beyond eighty, whose cardio-vascular-renal status had been gravely incriminated, who were well frightened by authoritative "opinions," who had lapsed into muscular lethargy, stagnating dangerously and suffering many well deserved organic disturbances. These none the less were urged to get and keep busy in definitely prescribed particulars and degrees, whereupon they improved vastly in not only organic poise and competence, but in mind and spirit and disposition. Indeed one may say—they did—that they had been mercifully emancipated from a doleful existence.

As to details of suitable exercises, the reader is referred to what I have elsewhere advised, making modifications to suit altered or special circumstances. The senescent must not begin suddenly to perform quick, all-over, exhausting movements, but should go slowly. He may then rise to remarkable capacities for activity. The best forms of exertion are those of gardening, simple sports, bean bag tossing, croquet, ping pong, pool, billiards, parlor golf, shuffle board, shooting gallery and the like, and some sports hereafter to be mentioned.

Let me cite personal experiences which exemplify the principles which should govern the expenditure of energies at any age, especially the period of rapid decline. Remember function makes structure and bodies can only remain sound through functioning adequately.

The head must learn at all times to save the heels—especially must an elderly head—presumably sound—save deteriorating heels. A wise sixty-five years old

East Tennessee mountaineer was my woods mentor for many boyhood summers. Not the least important of many valuable of his lessons was how to walk the hills, to make the longest journey with the least expenditure of effort. Let him who would achieve this accomplishment lay to heart "Uncle Buckshanks" aphorisms: When you set out upon a day's journey in the "mountings"—this is vernacular, not a pun—begin easy, never hurry at any time, least of all at the start. Keep in bind it is the steadiness of pace, not the velocity which gets you there in the best time and condition. On an uphill grade set each foot down in turn deliberately, firmly, from toe to heel, before lifting the other. As the grade increases slow down in proportion more and more, till on ascending really steep places "fairly crawl." "When any ways winded set down a minute, if bad, lay down, but you won't git winded if you handle yourself right, use your power nice."

Active Occupations and Amusements For the Over-Mature.

How much should the man or woman of late maturity or old age be permitted, or encouraged to do? What sorts of active occupations, of strenuous amusements, of bearing responsibilities involving anxieties, should he or she be encouraged to assume? The crux of the matter lies in the state of mental poise which can be demonstrated or acquired.

More expert judgment is needed by the over-mature, in the domain of permissible activities, than probably in any other. A conservative statement would be that when a man or woman passes the three score mark there is then most needed good counsel as to the matter of exacting occupations and equally of active amusements. Dominant, self-sufficient individuals who have acquired the conviction, from fortunate experiences, that they are fully qualified to judge for themselves in this critical epoch, stand in grave danger of coming to serious harm.

The products of a life of effort, of well-earned reputation, handsome successes, preservation of what may appear perfect health, is thereupon oftentimes squandered pathetically.

First and briefly of the absorbing occupations which have proven satisfactory up till the curve of energies tends to readily outrun the curve of resistences, also of tissue integrity. The aphorism that "a man is as old as his arteries," while needing much modification in the light of exact findings may well serve as a practical guide to conduct. A diseased artery is the product of various causes of which tissue stagnation is only one and "early indiscretions" another, e. g., endoarteritis.

The man of sixty deserves comparison and contrast with the woman of sixty on the ground that the male of the species is found to suffer far more from arterial and renal degenerations than the female. The reasons are many and obscure. Suffice it to say that the causes of heart, blood vessel and kidney degenerations are due chiefly to variations in powers or readjustment, of coming promptly back to equilibrium after stress and strain. Impairment in the coefficient of automatic adjustability depends upon the status of the ductless glands. These are the great regulators of energy, of cellular poise, of oxygenation, in short, the whole life cycle of vitalized mechanisms. The dominant group of these blood glands (hæmodogenic) organs or endocrines, is the "great triad," the thyroid, the pituitary and the adrenals. A close second to them is the pancreas, the liver and certain others about which some debate obtains.

Here we have a topic which has come somewhat suddenly and dominantly into the foreground of attention. Suffice it to say no physician, nor intelligent layman, can afford to omit attention to it. He should familiarize himself with the outstanding facts and such reputable conclusions as are reached, or modified through experience. When any one of these regulator glands have suffered disorder or depreciation, fortunately the others take on function; thus a fair balance is usually maintained.

It will be evident that when one or more endocrine organs have been put out of commission, the others work overtime and thus tend to exhaust themselves. The phenomena of senescences is best visualized as a steady, and usually rapid, deterioration of these glands. When one or other has reached its limit of functioning it can be kept in action more or less by supplying the deficit, and this can be done partly by giving corresponding gland substances and partly by the use of certain drugs, or other agencies which at need fortify or retard their action, and often with marvelous effect. So much for medication.

We may here recall the postulate that the objective of life extension embraces all measures capable of maintaining equalized action, reaction and interaction throughout the organism. Here we again face the question of suitable blending of activities and rest, in which enterprise large judgment is demanded, to protect from overdoing and equally from underdoing.

Long ago, Sir Clifford Allmutt made a statement, in reference to the ending phases (terminal phenomena) of arterial degeneration, to this effect; it is a common experience to observe a man of fair success who, in the display of his apparent wisdom, retires from business in the plentitude of his powers and, to quote scripture: "sayeth unto himself now soul, be merry, eat and drink, take thine ease, having striven earnestly all these earlier years." The sequel to this resolve shows singular unanimity. After a short period this fortunate man "dies with a thundering apoplexy." Why? Well, if there is one certain lesson to be learned from the science of physiology and from medical experiment it is that too sharp a contrast, or contravention of natural methods, is not only unsafe but fraught with urgent perils. During the period of full activities his blood vessels were kept in balanced tension or tone, the blood was sent round the clock steadily, notwithstanding many overt stresses and strains. Upon ceasing activities all cells tend to depreciate.

Dr. Louis Faugeres Bishop says: "I have taken care of many of these persons" (with high blood pressure or other evidences of vulnerability in heart, blood vessel and kidney domain) "for long periods of time. In the first place, I would select the best remedy of all as outdoor exercise. If you can get these women with very high blood pressure, and all the nervous symptoms and everything else that goes with them, to take a long walk every day, you have won half the battle in taking care of them. Exercise is the best heart stimulant in the world; it is the best lung stimulant; it is the best kidney stimulant; it is the best antidote to worry. Next to that I would place diet. The most essential element in the treatment of this group is the exclusion of eggs from the diet. Some of them are sensitive to eggs, but not all. But, as a matter of strategy, the exclusion of eggs is essential. If you exclude eggs from the cooking, you exclude a great deal of protein. In our present economic status eggs are very objectionable, because of poor quality. (Footnote: Mostly "cold storage," hence they have undergone deterioration—often are become poisonous.) Of course, excess of meat should

*See for vividly interesting reading, even by laymen, "Internal Secretions," by Chas. E. deM. Sajous; also "Old Age Deferred," by Arnold Lorand.

be avoided. The third important element is care of the intestinal tract. Most of these people are laxative fiends. They have been taking laxatives all their lives and they suffer from auto-intoxication, which arises in people who abuse laxatives. Castor oil is the best of all, a full dose on alternate nights for a week, then skip a week, then two weeks, then three weeks, and then a full dose once a month as long as they live."

Indoor Sports, Safe and Simple Training Measures For Re-Establishing Functional and Structural Poise in the Elderly or Convalescent.

The following brief suggestions are from much personal experience which began during my earlier pofessional work while an assistant to the late Weir Mitchell. His views are reflected with elaborations and amplifications of my own.

Clinical opportunities have steadily increased my confidence in the paramount value of reawakening in elderly people latent impulses to full symmetrical mevements and, in particular, to compete on the plane of muscular activities kept well within safety limits. Here we have a natural means of retaining or reattaining, former capabilities and of rehabilitating powers and functions long losing ground.

Personal taste influences interest in the subject. I have seen only benefit—sometimes unbelievable re-establishment of alertness and capability—but never the least ill effects, from rational activities.

While passive doings, manipulations, massage, etc., are often necessary preliminaries or accessories, it is a well verified fact or law of physiology, that to incite purposive control is the essential means of re-establishment. While outdoor doings are best, indoor competitions are nearly as good and more convenient and capable of system and consistency.

Among the best competitive games are:

Tossing and catching a bean bag, size 6″ x 6″ and at first half filled with beans, later packed almost full, thus resembling a base ball but much easier to catch and throw. It is also safer for furniture or from causing other kinds of damage.

In a normal man, the primitive impulse for play, the delight in games of ball of one sort or another, persists. The only difficulty is to select a suitable form and method of play for the older men. Tossing and catching a bean bag is entirely suitable for the weakest, the most timid and unfamiliar with ball practice.

This form of malleable ball may be tossed straight, overhand, underhand, or round arm in turn, high or low, to one side or the other, slowly or with increasing swiftness. All sorts of variations are possible, demanding side and back and forward stepping. Thus one cultivates quick observation, sense of time and distance, poise, foot play, precise control of balance, abdominal compressions, also a "genial glow."

A cane is also an excellent tool, first to swing in all directions like a club or "shillelagh," or as a sword to cut and thrust, even to the parrying of blows aimed kently and slowly by another, to guard the head, body, legs, etc., or grasped and rotated back and forth to strengthen the forearm; also two persons may seize the stick in their two hands, four in all, similarly placed, e. g., one hand fingers up (the left), and one hand fingers down (the right), then one to push or to pull, while the other resists, forward and back, sidewise, etc. The back and forth pushing or pulling is an admirable preliminary to the hand and foot wrestling. The art of "single stick" is an anicent Saxon sport and can be modified to suit needs.

This single stick wrestling is a safe and excellent method of cultivating another primal impulse, defense and offense tactics, of training one in quickness, the nice application, or release of force, of cultivating steadiness and "nerve" under stress.

Hand and foot wrestling: In this exceedingly mild competitive sport the right hand seizes the right hand of the opponent, the right foot of one touches the side of the right foot of the other, or left to left, then try to push the opponent till the foot behind is compelled to move from its place. That counts a point. Then change attitude, alternate the hands and strive again, changing each time. The one loses a point by compelling the opponent to move his rear foot. There are, as elsewhere, e. g., in boxing or fensing, four major movements on each level, and any number of modifications by changing the level, by forcing the adversaries hand up, or down, as well as back or fourth. This defense is for the purpose of confusing the adversary, by strongly opposing or suddenly wholly relaxing, while maintaining the balance; then by a sudden unexpected push or pull or twist, to surprise the adversary out of his or her poise.

This simple game supplies admirably all, or most, of the needed facilities for cultivating poise, firm accurate arm, leg and body control, power, balance. The "bout" can be made as easy as one likes. The force can be graded increasingly. The competitive element is mildly exciting and power and purpose and precision thus grow. It can be made to become interesting to any one, male or female, who is not dead on their feet. Dr. Mitchell taugth me this and he used it with much effect in convalescents, with timid, unsteady persons, especially the old or those suffering from disuse cripplings.

One other, a variety of the many forms of "floor exercise": The subject lies down on a mattress or two pillows, or one pillow and later on folded quilt, and is directed to make various movements, stretchings, turnings, rollings over and the like, similar to those a child does in learning to walk or to try out its limbs and paces, and the means of getting about without rising to knees or feet. These movements are too numerous to be described here.

The object of exercising in a lying down attitude is, as I have elsewhere stated at some length, to perform in the primitive posture of man as he progressed through his eariler stages from the quadrupedal to the erect stage. The over-sophisticated, especially the over-matur man, needs encouragement and direction in executing such acts as rolling over, progressing on all fours in the prone position, or while on one side or on the back, by crawling, primitive stretchings, body adjustments on a level surface, turning from end to end, getting about from place to place. Far up the phylogenetic scale man fought, wrestled, defended himself from a more powerful adversary, or when he was weaponless, from the relative vantage attitude of lying on his back, or side, or belly. From this attitude he could often regain positions of avantage most satisfactorily; as is done in Greco-Roman wrestling.

Most of these primal capabilities have faded from consciousness in the over-mature. They are latent still. A fact of significance is that, in order to retain or regain harmonious actions during later age, they should be cultivated in accord with these eons old,

*See book by William Bennett, entitled "Exercising in Bed," for an excessive elaboration of a simple subject; also Curtis Adams of Pompton Falls, New Jersey, employs clever and original systems and methods.

primary instincts, not so well by doing new, strange and complicated ones.

Of course, the sense of dignity, of appropriateness of the over-mature, is outraged by the idea of such "ridiculous performances." Their feelings in this regard are colored by the artificial shakles of civilization, as each one interprets them. Vae Victis! It should afford some comfort to learn the indubitable fact that the *fons et origo* of grace, of motor proficiencies and economic attitudes, rest on the faithful performance of movements in accord with original design and function. The best of these performances are those done while lying down, or squatting on one's haunches, or progressing on hands and feet —all fours; in short, simulating the movements of primal man while evolving from the tree climbing ape to that of *homo sapiens erectus.*

Removing Obstacles to Free Movement.

So much for resuming spontaneous activities, similar routines, the treading of well beaten pathways, the pursuit of customary practices or mild adventurings in familiar fields.

A word now as to regaining impaired proficiencies, re-establishment of functional facilities. In short, the clearing away of structural obstacles from pathways is a prime condition of facile progress, in avoiding disasters and in preserving one's fund of energies at par, with due regard to inevitable limitations.

Here we face the problem of retraining long disused or inadequately used, muscles, and in giving scope to suppressed mechanisms. As senescent structures begin to show the inevitable stiffnesses, restrictions in mobility, joint dryness, every step of the way must be sustained by pursuit of rational exertions. Life, or livingness, must now be acquired through persistent and intelligent effort. It is a losing game, but it may be a long time before defeat comes.

The prime need of the elderly is for amplified oxygenation, hence the bellows must be kept up to their full work whatever else may be neglected.

Rigidities in the bellows basket chest arise through the replacement of elastic muscle by inelastic, a shrinkng of connective tissue, also there arise similar changes in the junctures of the ribs and the vertebral arthroses and amphiarthroses. The deterrant effects of these changes can, however, be long postponed or minimized by more complete use, also enhancing the distribution of blood and lymph.

The circulating tide must be encouraged to ebb and flow steadily through fuller propulsions and recessions. Obviously the chief and constant aim is to maintain respiratory competence. The immediate, the imperative objective is to regain pliancy in all the mobile mechanisms, in order to release the progressive compressions upon the contained organs, pumps, tubes and bellows.

If my choice were limited to one form of restorative procedure alone, it would be voluntary movements of breathing which include abdominal and diaphragmatic compression. Respiratory training should be performed with faithfulness, precision and completeness. Details in method have been presented elsewhere. Forceful in-breathing is of some value but by no means is it comparable to emphatic out-breathing. In-breathing forcefully helps much in distending the lung spaces, alveolar cells, in opening up partially collapsed bronchioles, in widening pulmonary capacities in stretching the rigid ribs, junctures, plurae, pericardium, etc. All this is desirable in placing the thoracic mechanisms in positions of advantage wherefrom to act.

Forceful out-breathing, expiratory emphasis, is of paramount use for a number of sound reasons. Among these are the need for emptying the lungs of the tidal air and expediting changes in the residual air which, when long retained becomes foul and poisonous. Purposive expulsion of air does much good and, if thorough, will be accompanied by indrawing of the abdominal walls and a downward action of the diaphragm, also a collateral movement of the big muscles lying in front of the backbone, the psoas, iliacus, and quadratus lumborum. Thus a greatly needed compression is exerted on all the abdominal, as well as the thoracic organs, spheres, tubes, nerves and the like.

These compressions of the viscera aid materially in the full functioning of all the vital organs. In particular they expedite rythms, cycles of energizing, absorption, elimination of solids, fluids and gases; in fact, all the waste materials. Thus oxidation and oxygenation is helped from this end of the respiratory tree, chemical and enzymatic elaborations, briefly, tissue respiration.

The value of respiratory exercises is so great that the Yogi's of India have erected the procedures into an integral part of their religion. This, like all definite religious commands has for its basis instinctive measures designed to enhance bodily conservation and mental poise. Breathing exercises can be taken standing, sitting, lying down, equally well. They can be used alone or incorporated with any other voluntary acts, whether the performer be vigorous or howsoever ill or disabled.

To be sure, a brisk walk in the open air, facing a stiff breeze, does all this and much more. It clears the brain, the nose. Lets all the currents in fuller motion.

Let no old man or woman cherish the delusion that merit or safety lies in stagnation.

A Doctor's Story

DOCTOR AND PATIENCE.

HAROLD M. HAYS,
New York.

(Continued from February issue.)

CHAPTER IX.

For a few days after Ahearn's visit I was in a blue funk. I could see a detective hiding around every corner and was sure one was going to pop out at me sooner or later. I kept wondering how Vandeleer was feeling about it if I, an innocent accomplice, was so scared. I wouldn't have wanted to be in his boots for the world. I suppose he didn't know the District Attorney was after him, but I couldn't understand how anyone could feel comfortable living under the shadow of the law.

However, as week after week went by without any visitations from the powers that be, I came back to my normal self. Evelyn had consoled me and quieted my fears. She couldn't see how I could have helped myself. She made me promise that I wouldn't go on another case with him. One morning Vandeleer rang me up.

"Hello, Snaith," he said. "I would like to have you assist me to-morrow morning. Small case. Not much in it."

I had not heard from him in some weeks and had hoped he had forgotten about me.

"Sorry, Doctor," I answered. "I'm pretty busy to-morrow morning."

"I'll fix it for the afternoon, then," he replied hastily.

"Have to go to the Dispensary. Think you'd better get someone else."

"Say, Snaith, what the devil is the matter?" he said in a snarling tone. "Getting so damn cockey you can't help a fellow any more? If you are, I'll come over and get introduced to Mrs. Astorbilt and your other rich patients."

I laughed.

"The four hundred haven't come to me yet. To tell you the truth, Doctor, I don't care to get mixed up in any cases that may make trouble later on."

"Got one of the Sunday-go-to-meeting consciences, haven't you? You'll get off your high perch yet. Well, if you don't want to make an extra fiver, I'll get someone else who isn't so all-fired particular."

That was the last I heard of him and now three months more had gone by.

My practice was getting along well and, except for this one case I had a clean slate. I had done more in my first eight months than I expected to do in the first year. Yet I was not very busy. There was hardly a day when I didnt have more time on my hands than I wanted.

Being idle was one thing I couldn't stand. I wasn't used to it. I had never been used to it. I had to be doing something all the time. On my vacations I could play as hard as anybody. But I had never, until I went into practice, had to "stay put" in a place whether I had anything to do there or not. Six hours of the waking day I had to be in my office waiting for patients. If one came in, it might take me half an hour to dispose of him and if I had six patients, which was the greatest number I had had in a single day, I would be busy for less than half these six hours. This meant that I had at least three hours to spare every day.

When I first got settled I used to spend half my morning over the newspaper wasting my time reading a lot of stuff that wasn't worth while. When you come right down to it a man can get almost all he wants out of the newspaper in fifteen minutes. Of course, if he is interested in baseball or the stock market, that's a different matter. I've often noticed that when a man's so busy that he only has time for the headlines, he's as well satisfied that he knows what is going on as he would be if he read the whole paper. After I had put the newspaper aside I'd, perhaps, write a letter or so and then turn to reading one of the medical periodicals.

I don't like to be too severe, but the more I read what medical men wrote, the less I thought of their writings and the more I came to the conclusion that out of the over two hundred journals published in the United States, about one in twenty was worth while reading. It seemed to me that many journals existed merely to give the editor a living.

I didn't subscribe to many journals. There were good ones, like the *Journal* of the American Medical Association, *Surgery, Gynecology and Obstetrics*, and the *American Journal of Surgery, that* I thought every good surgeon should have and I read these most carefully. In my mail were sample copies of medical magazines which should have seen the waste-basket off hand. But having little else to do, I often wasted my time reading stuff (there is no other name for it), which was so poorly written, and was such a rehash of things already known, that it was a crime to waste the time.

"If I couldn't write better than that," I said to myself one day, "I wouldn't touch my pen to paper." And then I wondered whether I really could write and what I could write about if I started in. Suddenly, I became ambitious and decided I would write. Then I looked blankly at the wall for ten minutes and never had a thought to inspire me.

One day when I was assisting Dr. Armstrong he had introduced me to Dr. Brownold, a man of about thirty-five, who specialized in anesthetics. We took a liking to each other and as time went on, a friendship developed. I had often seen Dr. Brownold's name in medical journals of the better sort. He frequently wrote articles on anesthesia, every one of which was well written and right to the point. I often wondered how he could find so many things to write about in such a small field. Brownold had rung me up a few days before to ask me to dine with him.

When I saw Brownold I told him I was thinking of doing some writing.

"Have you ever written anything?" he asked.

"When I was in college I was on the *Daily*."

"That's good experience. You ought not to have any trouble writing medical things."

"But what the devil can I write about? If it's to be anything, I want it to be good, to be worth while reading. I never knew how poorly medical men wrote until lately. I mean they seem to have no knowledge of construction. I've read some stuff that was so poorly put together that it sounded as if it had been written by a ten-year-old kid."

Brownold smiled.

"Don't let that worry you, Snaith. I agree with you but, take it from me, every young medical man ought to start in writing as soon as he gets out into practice. He ought to do it for two reasons: it teaches him how to express himself and increases his powers of observation. How little the average man observes! Doctors have been taught observation and, along the lines they are trained, they are good observers. But there are few medical men who realize that by training their powers of observation, in some line outside their own, they will be better doctors. You think you observe pretty well, don't you? Let me ask you a few questions: Are a cow's horns behind or in front of her ears? When a horse is lying down and wants to get up, does he get on his hind feet first or his forefeet? On which side does a lady button her jacket? Does a man's jacket button on the same side? What is the color of my eyes? I'll bet you can't tell although you've seen me a dozen times. Yours are a gray green. You're engaged, aren't you? Did you ever notice whether your fiancee's ears were ever pierced?"

"I'll be darned, old man," I answered laughingly. "I don't think I could answer one of these questions offhand. I know a cow has a stiff tail and four feet and a milk-bag, but hanged if I know whether her horns are in front of her ears or not."

"Well," he said amusedly. "The next time you see a cow notice and notice hard. "You've heard the story about Agassiz, the noted physicist, and one of his pupils, haven't you?"

"Don't believe I have," I began to think I had a brain about the size of an ant.

"Agassiz was a great believer in the cultivation of the powers of observation. One day a new pupil came to him from a foreign city. 'You desire to be instructed by me?' asked the scientist. 'Yes, sir,' said the student. 'Then you must do as I say. I will give you your first lesson.' He took the student into a bare room in which was a small plain table and a wooden stool. On the table he placed a fish, pencil and paper. 'You will study this fish. It is now nine o'clock. You will look at the fish until I return, may be at noon, and write down all the interesting things you notice about the fish.' Then he left. The student looked at the fish. In

the first half hour he wrote down all the things he had formerly known about a fish and then he sat doing nothing. At noon the scientist had not returned. Becoming hungry, the student went out to get something to eat. When he returned Agassiz had been there and had left. A note was on the table telling the student to keep on with his study until his return. All the next day the student studied his fish. It began to be a very different fish. He not only noted the mouth, gills, fins, tail, scales and so on, but the size and color of the eyes, the shape of the the mouth and even a lot of details of the inside anatomy of the fish, Twenty-four hours later Agassiz turned up and asked the student what he had learned. Later this student, who became a very noted scientist himself stated, when telling this story, that this was the best lesson in observation he had ever had."

"There's no doubt about it, that no one of us uses his powers of observation to their full extent," I said. "It would be a good thing for all of us to train ourselves more."

"It's easy enough to do, old man," he continued, "particularly one can train himself more in medical and surgical observation. You have done so more or less unconsciously. For example, no doubt you can visualize any operation you know. You have developed *x*-ray eyes—that is, you visualize every abdomen or chest you examine. You've been trained that way.

"But to get back to the subject we were discussing, writing medical papers. You said you wondered how I could be writing decent stuff continually. It's just a question of observation. If a patient flickers an eyelash in an unusual manner during an operation, I see it at once and seek for the cause. Perhaps in doing so I discover something new. You've seen my suction apparatus, haven't you?"

"Yes, of course," I said smilingly. "Everyone uses the Brownold apparatus."

"Do you know how I came to invent it?" he went on. "In throat operations too much blood got in the way. Observation number one. Then I began thinking up a suitable apparatus. One day I saw a vacuum cleaner. Observation number two. The rest was easy. I had been doing some dilatory writing up to that time. After that I was deluged with requests from reputable medical journals for articles. I turned that apparatus inside out, writing about it. I saw the profit in writing—it was good advertising—and I've kept writing ever since."

"That's all right for you, Brownold," I said, "you've got a knack for writing. I haven't. It would be hard as the devil for me."

"Don't you believe it," he answered. "There is only one way to learn to write—write. Some men are gifted and find writing easy; others have to learn to write, but it's damn hard work. You'll like it. It will allow you to spend many idle moments profitably. Try it."

"I'd hate to imitate some of this second rate stuff I've read," I said rather discouragingly.

"You don't need to imitate it, Snaith. There are many reasons why medical journalism is second class. In the first place, the journals are hungry for material and many take anything that is offered them—provided it isn't some frank advertising of some proprietary—because they are afraid to refuse it. They get something for nothing and they just about get their money's worth. Secondly, many papers are obtained by agents at medical society meetings. The doctor who reads the paper hands it over without proper editing. The paper was O. K. for reading, but rotten for printing. It isn't properly edited, with the result that the author himself is no doubt ashamed of himself when he sees it in print.

"There is only one way for the editors to get good medical articles and it's bound to come in the future. I don't see why they don't see their way clear to it now. They ought to pay for work the same as any editor of a popular magazine does. They would then be able to turn down articles or, what is of equal importance, they would have well-known men writing for them all the time."

"But I don't see how the young men would ever get in," I interposed.

"The same as he gets going in medical practice. He'd have to build up. The editors want good stuff, and they wouldn't refuse good material from an unknown man."

When I left Brownold that evening I was fired with ambition. It was rather late and a thin, damp drizzle fogged the street lamps on the broad avenues. But I decided to walk home, hoping that some inspiration would come to me on the way. I was about half way home when for no known reason my thoughts turned back to some work I had done on tubercular glands of the neck while I was an intern. That would be a good subject to write about, I thought. I had made up a preparation of bismuth and other medicaments which could be injected into the glands after they had broken down and the pus had been removed.

When I reached the office I took off my soaking wet clothes and got into pajamas and bath robe. Then I sat down at my desk and doped out my first paper which I titled "The Non-Scar Treatment of Tuberculous Cervical Glands."

My thoughts were too active for sleep when I got to bed at three in the morning. But I didn't feel as though I needed sleep. What I did need was a good hold on my nervous system so that I wouldn't bust before that paper was written.

(To be continued.)

Public Health

Physical Examination and Reconstruction Making Employees 100% Efficient.

A. A. Bureau, Manager Industrial Relations Department, Morris & Company, Packers, delivered an address before the Ninth Annual Safety Congress recently held in Milwaukee, Wis.

One of the great problems today before the industrial committees of big industries is the finding of the exact place physical examinations should occupy in the selection of employees. In the past we have hired men upon the basis of education or skill. In this day when physical examinations (army and industrial) are so common, we are beginning to realize that there is still another great factor in the hiring and placing of men. A man's mental alertness, soundness of judgment, or efficiency and skill in his trade depends, to a large extent, upon his physical condition. A man in poor health is like a dirty machine. He cannot make his body respond quickly in the face of impending danger. Also, he cannot do his best, regardless of how good the working conditions may be. As to safety, an abnormal man is never 100% mentally or physically alert. As such, he decreases the safety of his fellow workers. Accidents are costly misfortunes both in human suffering and cold cash. As to efficiency, anything less than his best is a decrease in the production of that department. The loss in production caused by the physical health of one man, when multiplied by many such men, soon can make a marked difference in the total amount of produc-

tion for the plant. Therefore, the physical condition of the employees is an important factor; first, in the reduction of accidents, and second, in the cost of production.

Looking upon physical examinations as one means of controlling the number of accidents and the cost of production, I believe that the place of the physical examination department shall be looked upon more and more as an absolutely essential part in any well regulated industrial organization. Also there will, as time goes on, be more emphasis laid upon the grading of workers as to their physical fitness to perform the work of the particular job for which they are hired. In industries where there are no physical examinations, they will be required, and in industries now conducting such, the work will be done with more care and precision.

Physical examinations as now conducted in army, civil, or industrial life, are to keep out the physically unfit from that particular organization. The army refused the imperfect man, the life insurance company rejects the poor risk, and the industrial organization turns down the man liable to be injured, at his work. Then we have the just passable class in industry which may be in the unfit class of tomorrow. Our physical examinations accordingly, in the future, must take on a broader scope—in other words, if they are to serve the community and industry as a whole they must build up some form of reconstruction work to be followed among their employees.

The first step in the elimination of the unfit takes place in the employment office. It is the duty of the employment manager to hire those he deems good risks of industry—that is, men who have the necessary strength and energy to safety perform the duties of the jobs open, and to pass up the rundown and the physically unfit otherwise. This may seem a divergence from the subject, but it is a very important step and must not be overlooked. The doctor's office is not then made a weeding-out station. The doctor must ever stand as the friend of the plant workers. In fact, he must take the place of the employer, as the caretaker of his injured employees. In the olden days, in case of an accident,, the boss went personally and looked after his hired man. But the times and conditions have changed with the rise of big industries. In his examinations, the examining physician must stand as a reconstructionist, if confidence is to be placed upon his advice for the physical upbuilding of the one examined. If the doctor's office is seen as their true friend in the time of their physical disabilty, there can be no more powerful influence in the getting of the good will of the employees. Therefore, the doctors should be called upon to reject very few men; in fact, only in case the disabilities are hidden. The employment manager must be held strictly accountable for the class of men he hires. It makes a much better impression with labor to pass up a man than to have him rejected because he cannot come up to the company's set rule. Under no circumstances should the employment man be allowed to pass the buck to the doctor's office for the rejection of all the unfit.

After the hiring of the applicant ultimately comes the physical test for fitness. The examinations may be conducted immediately and before the man goes to his job or after he has been on his job for a few days. We examine our men after they have gone to work. Several obvious reasons present themselves for this procedure. First, it is easier to induce the men to go to work. They do not have ever in their mind that immediately following the acceptance of the job they will have to be subjected to a physical examination—a thing ever repulsive to the workers. This way they will be given a chance to see if they like their job and want to stay with it. Our experience is that the men don't mind the physical examinations so much after they are hired. In fact, a refusal is a rare thing. These are usually among the ignorant whites.

Second, the examinations can be made more thoroughly and will be of greater benefit to the employees. Our big hiring day is Monday. The rest of the week is slow in comparison. Thus, if the doctor had to examine all of Monday's applicants on Monday, he couldn't do nothing else but give them a very superficial examination. In very few cases could he actually take time to give advice. If the doctor has more time, he can advise each one personally. Also, he will have only as many as he can handle by calling the applicants from their work.

Third, examinations on which the doctor can spend time and give adequate counsel create loyalty to the company, and give the man a view that the company doctor is a real friend, not one who does just as little as possible because he is a company doctor.

The calling of the men up to the doctor's office is an ordinary matter of routine. First, the time office furnishes a list of the additions, transfers and take-offs from the payroll to the examining physician's clerk. Then he makes up a list of the men required for examination. The record card of those transferred is automatically renumbered and refiled. The record cards of the take-offs are removed from the live file and placed in the dead file. The list of the unexamined is sent to the different foremen by a messenger boy, who goes to each and notifies him of the men he is to send to the doctor's office that day. The foreman gets a duplicate copy of the list and puts his name on the original list to show that he has been duly notified, and he is thus held responsible for sending these men to the examining room that day as he can spare his men. With each man is returned an O. K. card to show the foreman that the man has been to the doctor's office, examined and accepted.

The examinations are conducted more or less on the army style. We have the applicant remove his clothing. Every irregularity is diagnosed and noted on his record card. The examinations are thorough in every respect. Then at the bottom of the card we note our opinion of the safety risk and fitness of the applicant.

During the month of July we made some rather broad studies of our physical examination findings, based upon the record cards of 855 men. It rather startled us at first to find so many defective men; however, in a study made by a life insurance company, it reported only a little over two per cent. of the men they examined were found perfect. Out of this 855, we found sixty-eight men, or 8% had some defect of the hand or arm, such as amputated fingers, stiff joints, rheumatism, cut tendons, etc. Thirty-three men, or approximately 4%, had some defects of the feet, as bunions, deformed toes, amputations, etc. Fifty-eight men, or about 7% possessed some varicose veins which, in most cases, are not now serious, but will, in old age, be a very serious annovance. Two hundred sixty-two, or 30%, were afflicted with flat feet. This includes from slight to

extreme flat feet. One hundred fourteen men, or 13.4%, had some form of organic heart disease. Seventy-seven, or 9%, possessed a hernia, either umbilical, single or double ingunial hernia. Seventy-six men, or 9%, had piles. Nine men, or 1%, were found to be blind in one eye. Taking 20/40 as a basis for poor vision, sixty-five were found to have poor vision in one eye and ninety-seven, or 11%, to have poor vision in both eyes. Also, we found sixteen other defects of the eyes, such as strabismus, cataract, nystagmus, ulcers of the eye, etc. Six men were found with some form of venereal diseases. In most of the cases, the defects were minor and did not affect the efficiency of the worker to any great extent. However, they make him liable to accidents.

In a more recent examination at our car shops of one hundred eighty-two men, we found 55 defects which made the men employed in a more or less risk to the company. Of this number of men we classed one hundred forty-two men as good safety risks. Thirty-four men as fair safety risks—that is, they were passable, and six were classed as poor risks, or below the standard to be employed.

The causes for which we reject men are: First, contagious diseases of various sorts, such a venereal disease, tuberculosis and skin rashes and eye diseases. Second, poor safety risks. This includes those who are more or less a safety risk to the plant, endangering their own well being or that of their fellow employees. In this class are hernieas, very poor vision, paralysis, fits and the like. When possible, we place this class of men in positions that do not require the same energy or strength as the ordinary job. Third, the physically undesirable, those who should not work at some particular class of work. This includes the weak lunged in the fertilizer or hair house, rheumatic people in the pork room, tripe room, freezers, where there are wet and cold conditions. In most of these cases we try to find something else open in our plant where this individual may work without injury to his health.

Our physical reconstruction work may be divided into three different classes: First, medical advice (a) advice regarding simple medical treatment which they can do for themselves, and (b) advice as to the work which they can and cannot perform to their physical well being. Second, medical and surgical aid. Third, advice and instruction as to free dispensaries.

For minor medical cases we often write a prescription. In many cases we recommend something that the man can buy at the drug store at a very small cost. This applies to skin rashes of a non-contagious nature, bronchitis, colds, etc.

In the case of bad varicose veins we either recommend that the man have an operation for the same or wear a rubber elastic stocking.

In the heart cases we give these men advice as to what kind of work they can do with safety to their health and also general advice such as to avoid running upstairs and the like.

Our venereal cases are simply directed to go to a good physician and get a permanent cure or go to a government or city dispensary and get the proper medical treatment there; also to avoid quacks. In no case do we allow them in the food producing departments.

For hearnias we advise operations. The young man we especially recommand an immediate operation while he is young and can easily undergo the operation. In the case of an old man we recommend that he get a truss. In all cases, we require either an operation or the wearing of a truss before they come back to work.

Also, we find a lot of men who have not been vaccinated, especially among the colored. Here we require vaccination either by their own doctors or the examining physician.

In case of failing vision we lay strong emphasis upon their securing of the proper glasses for their eyes. If they haven't the money to purchase the same, we send them to a certain eye dispensary where they only have to pay for the lenses.

The amount of ignorance prevailing among the ordinary workman is appalling as to where he can get free medical attention without cost or expense to himself. In most cases this free medical attention is far better than he could afford. In the large cities there are hundreds of free dispensaries for every kind of an ailment, dental, eye, operative, skin, lung, medical, etc.

Many workmen have serious defects often unsuspected by themselves. Many come in who have no idea as to the condition of their lungs, others as to their heart, etc. Most workmen do not realize the seriousness of having a hearnia. We question them about it and advice the proper treatment, and they will come back invariably with the statement that it has never bothered them. Many would rather quit their job than buy and wear a truss. Many do not suspect at all that they have a hernia; in fact, good sized hernia, until it is brought to their attention. One case, especially, the old colored man said to the doctor: "I got a swelling and I'se been putting everything on it, salve and poultices, and it won't go away." What he had was a hernia.

Then there should be physical examinations of the old employees at intervals to reveal if there is an approaching disease. Many a disease, if caught at the beginning, can be forestalled or warded off. The great trouble is that most workmen allow the disease to get a great hold upon them before seeking proper medical service. In fact, statistics show that 650,000 workmen die every year from preventable disease.

In conclusion, I wish to say that the hiring of men under a physical examination system is the only way of intelligently employing men. When the employer does not know the fitness of his men or the men do not know their own fitness, it is as though the blind hired the blind. Second, that physical examinations are not conducted to bar men from industry, but place them where the safety of their own well being is not endangered. Third, that by the examination system only can the employer get at his men to carry on any kind of physical reconstruction work among his employees. Fourth, from the viewpoint of efficience, physical examinationc are essential. To industries wrere they do not place their men according to their physical fitness, weak help is paid for very heavily.

Fifth and last, from the viewpoint of safety to the employees, physical examinations are not only absolutely essential, but should be required by the community for its own protection. No industry, because of its lack of oversight over its employees' physical condition, has a right to turn out men upon the community crippled and inefficient to be more or less a public charge.

Physical examinations pay from every point of view, safety, efficiency, humanitarian and cold cash.

The Medical Times

A MONTHLY JOURNAL

OF

Medicine, Surgery, and the Collateral Sciences

ESTABLISHED IN 1872

EDITED BY

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Associate Editor.

Contributions.—EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this publication.

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SUBSCRIPTION RATES:
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UNITED STATES . . . . . $2.00 per year
(Including Alaska, Cuba, Mexico, Porto Rico, Hawaiian and Philippine Islands)
CANADA . . . . . $2.25 per year
FOREIGN COUNTRIES IN POSTAL UNION . . . $2.50 per year
SINGLE COPIES, 20 CENTS

Definite written orders for THE MEDICAL TIMES are required from all subscribers, to whom the journal is thereafter regularly forwarded.

Notify publisher promptly of change of address or if paper is not received regularly.

Remittances for subscriptions will not be acknowledged, but dating on the wrapper will be changed on the first issue possible after receipt of same.

All communications should be addressed to and all checks made payable to the publishers.

MEDICAL TIMES CO.

ROMAINE PIERSON, *President and Treasurer*
H. SHERIDAN BAKETEL, *Secretary*

93 Nassau Street, - - - New York

NEW YORK, MARCH, 1921

An Increase in Subscription Price.

We find it necessary to increase the subscription price of THE MEDICAL TIMES—a necessity imposed upon us by abnormal conditions in the publishing business. At present prices and under present conditions the journal can be produced at only considerable loss. Our manufacturing costs, barring the single item of paper, have increased 200 per cent.; the cost of paper has increased over 300 per cent. since the beginning of the war; postage under the zone legislation has increased 200 per cent.

Like most other publishers we have hesitated to take the drastic action necessary to meet these increases, until it had become entirely clear that it was a permanent rather than a temporary condition that faces us. Stabilization of business on a new basis has gone sufficiently far for us to be assured now that this higher level of costs will not be materially reduced, at least for a long time. In company with conservative publishers everywhere, we therefore find it necessary now to readjust the selling price of our publication to conform with the new conditions.

The subscription price has therefore been advanced to $2 per year and we trust the readers will appreciate the necessities of the occasion and will act in accordance therewith.

Big-Library Bull.

The competition between our great medical libraries with respect to the number of books on their shelves is a bit amusing, when one reflects upon the vast amount of pure junk contained therein. Our remarks make no reflection upon precious incunabula or upon the large body of indispensable works and journals of one kind or another. Most of the junk is modern. There is something quaint about Benjamin Rush's treatise on the moon's relation to human ills; our present-day junk will never seem even quaint to our medical descendants of two hundred years hence—it will be banal forever.

The keeping of many intermediate editions between the first and last issue of a work has always seemed to us a custom uneconomical of shelf space. Such editions could be stored somewhere, if for one reason or another it were not thought advisable to destroy them, and this alone might obviate supposedly needed building operations.

Now, of course, as practical men we know why all this junk is kept upon the shelves. It furnishes the basis of appeals for supporting or building additions to a library, not only appeals to its members, but to philanthropists. It is a kind of watered stock which is supposed to serve at least one purpose.

We beg to submit the terrifying thought that one reason why our medical libraries are not better supported by philanthropists may be because the latter, as a class, are a wily lot, not at all likely to be deceived by the water in anything. Stocks and libraries, when highly edematous, doubtless look exactly alike to these, the most sagacious and discriminating of altruists.

Why wouldn't it be a good idea to squeeze all the water out of a medical library in need of funds, and then advertise it to the profession and vulnerable benefactors as an honest-to-goodness bookshop, incidentally revealing the degree of edema afflicting its competitors?

We really believe such dispensing with humbug would work admirably. All hands might have to clean house and get down to an honest basis, after which the competition would be more honorable—and more successful all round.

The Last Word (?) In Anesthesia.

Gwathmey reports that at the Presbyterian Hospital it has been definitely determined that the addition of a small amount of magnesium sulphate to the usual hypodermic of morphin increases the value of the hypodermic from 50 to 100 per cent. (*J. A. M. A.*, Jan. 22, 1921). The method is termed synergistic analgesia. The morphin is combined with 1 to 2 c.c. of a 25 per cent. solution of the magnesium salt. This method, it will be seen, enables us to employ much smaller doses of morphin than we have hitherto been obliged to use for any purpose. Gwathmey's particular interest has to do with the induction of oil-ether colonic anesthesia by smaller amounts of these elements (about one-half) than he has been in the habit of using, by means of preliminary treatment with the morphin-magnesium sulphate solution, but he suggests that this new form of hypodermic medication be employed in the transportation of the sick from place to place, especially in the transportation of the wounded from the battlefield. In such conditions as renal colic we should think it would be of inestimable benefit.

Gwathmey's improved anesthesia ought to prove a great boon and it appears to be a big step toward an ideal method. Dr. G. K. Dickinson, of Jersey City, has summed up its advantages as follows:

To any one who has witnessed anesthesia by the inhalation method, and then watches the most delightful, childlike slumber of the person under rectal anesthesia, there will be a great and comforting surprise. The cone to the face, even with gas-oxygen, is an affront. Those who prefer local anesthesia also give affront by their presence and manipulation; but the surgeon who quietly steals up behind and induces anesthesia per anum does not in any way disturb the psyche, and the chain of detrimental reactions is not instituted.

The Blue-Law Neurosis.

It is held by the medical psychologists that the blue-law reformer is a type of neurotic who feels inferior to the average man and therefore craves power wherewith to assert apparent superiority. Possessing no real ability, his neurosis prompts him to parade a militant moral righteousness and thus acquire a factitious superiority without the physical or mental exertion called for by genuine achievement. The neurosis is based upon strong cravings for things which nevertheless frighten him, upon a dislike of healthful sport, and upon envy of the happiness of normal men. The practical upshot is that he tries to destroy everything that excites him.

The sense of inferiority doubtless plays a large part in determining the conduct of these neurotics, but we believe that there is another group who are not neurotic but merely oppressed by a realization, partly subconscious and partly conscious, of their commonplaceness. It is their alikeness, not their dissimilarity, to the herd, that they resent and attempt to nullify in a manner. Not rightfully belonging in the ranks of our creative aristocracy, these mediocrities seek an artificial status in society which gratifies their vanity and gives them a fleeting notoriety.

In any case, it behooves us to lay bare the shallowness and make plain the menace of these nuisances. In these days of frank propaganda it would be well to meet their activities by the widest possible advertisement of their true characters. To this end, hard cash ought to be expended by way of the public prints, and some enlightened capitalist ought generously to subsidize expert psychopathologists to direct the campaign.

The Why of Old-Stock Degeneracy.

The large amount of degeneracy among the present-day representatives of the "old stock" in this country may be accounted for, in part, in the following manner:

The pioneer spirit, in the early days, characterized chiefly the leaders of movements which then expressed "world unrest." Their followers were in some cases, perhaps because of family ties, forced to follow where the leaders led, but more often the disciples were simple folk who, like so many sheep, ventured unknown dangers.

These leaders were the radicals, or "reds," of their day, and then, as always, counted their flocks chiefly from among the feeble-minded groups. Inciting the simple folk in certain communities to embrace their religious and political principles, or inspiring them simply through the force of their peculiar personalities, they induced them to defy authority, cross the seas, encounter hostile savages, and endure every conceivable hardship. The ideas of the leaders were clear enough, but that they should have been followed in their foolhardy adventurings to a distant and unknown hemisphere, is proof not of the possession on the part of the disciples of identical brands of initiative, daring and independence, but only of a low order of mentality.

It is absurd to insist that the residents of a particular community, perhaps a small village, in England, for example, were essentially different in the pioneer spirit from the people of other parts of England. The fact of the matter is that they just happened to be worked upon by a few radicals who could not be everywhere. These radicals could have set by the ears the simpletons in any other English village.

Our admiration for these leaders is unlimited, but we have no such feeling for their flocks, in the mass. The greatness of these United States harks back to the spirit of the pioneers, but we must also account for the degeneracy, so often evident in the old stock, that has survived down to this day along with splendid things.

The truth is that there was no lack of degeneracy among the groups in question when they landed, away back in the seventeenth century.

There is no mystery about the decay of this old stock, and the country has gone forward only upon new blood inspired, not by many of the descendants of the pioneers, but mainly by the original spirit of the old leaders.

It is conceded by the most careful students of these early immigrations that the ethnical and social status of such groups was very low indeed. We are speaking only of the English types.

It is an error to look for these degenerates to-day only in the dependent, correctional or psychiatric institutions, for they make up in large part the smug and prosperous "descendants" everywhere identified with reactionary interests, "paytrioteers" battened upon special privilege at the expense of other classes, people of the very sort with whom the "red" leaders of the old days fought their hardest fights.

The simpletons served a great purpose, but their progeny leaves one aghast to-day.

But of such things is the stuff of life made. A great experiment is begun, perhaps succeeds, and then descends a plague of cripples to all posterity, along with the golden heritage.

And these things are endurable, because hidden from all but the scientific investigator or sociologist, and not discussed in the *Atlantic* or *Saturday Evening Post.*

If it shall be said that we have traduced the fathers, what charge will be laid against Nature, which confronts us impiously with the fatal proofs in flesh and blood?

Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

Mark Twain on the Habits of Microbes.

"Of course there was a buzz of conversation going on—there always is; but at last when the Rev. Mr. Burgess rose and laid his hand on the sack he could hear his microbes gnaw, the place was so still."—
—From *The Man That Corrupted Hadleyburg.*

Newspaper Medicine That Is All Right.

A Boston physician thinks that civilization has made the modern woman less able to bear children than the women of the past. Yet he does not stop to consider that modern medical science saves the lives of countless mothers and children who would have been victims of ignorance in "the good days of old."
—*New York Sun, Feb.* 1, 1921.

Do You House a Little Complex?

If You Haven't One of These Psychoanalyst Things in Your Home You're Out of Date.

Have you a little complex in your home? If not—if no erudite psycho-analyst has penetrated into the recesses of your being and fished up your particular complex to public view—then you are lamentably in the rear of the national procession towards the light of higher learning. You'll never enter the Freudian heaven.

Thousands of our best citizens have been presented with complexes by competent psychoanalysts, and they are overjoyed with them. They regard them with the fascination of a child for a new toy. A parlor discussion without complexes is like the *Congressional Record* without boredom— it's simply impossible.

He who has not been psychoanalyzed, he who is complexless—well, he's beyond the pale. Nothing for him to do but go to Cuba or Morocco or around the corner to the prescription counter.

The complex takes many forms. There's the homicidal complex, the white lie complex, the subway complex, the persecution of poor mother-in-law complex, the—but enough. Blame it all on the complex, and you're quite safe.

An interesting instance of the usefulness of a complex was displayed in a city court recently. Brought to the bar of justice for beating his wife, a smiling gentleman waved a piece of paper at the Magistrate and said:

"Your Honor, it isn't my fault at all. Here's a certificate from my family psychoanalyst proving that I have a wife beating complex. I don't like it at all, but what can I do about it, I ask you?"

"Let me inform you, young man,' replied the Magistrate, sternly, "that I have also been psychoanalyzed. I haven't the certificate with me, but I can tell you that I have a complex for giving wife beaters thirty days on the Island. I can't help it at all. Next case."—*New York Sun, Jan.* 18, 1921.

The Physician's Library

Public Health and Insurance: American Addresses. By Sir Arthur Newsholme, K.C.B., M.D., 267 pages. Baltimore; Johns Hopkins Press, 1920.

This book is composed of a series of lectures given in the United States during 1919 and 1920. In a general way he describes the progress of public health work in England, showing the factors which have favored and those which have hindered Lecture number one is historical, dealing with the progress of public health in England during the past fifty years. Regarding the notification of infectious diseases, the author states as follows: "The present conditions of medical practice are largely responsible for the partial lack of success. Hasty conditions of work, failure to employ laboratory means of diagnosis, or to utilize available consultation facilities (especially in tuberculosis), and lack of training of medical practitioners in preventive medicine, are among the obstacles to further control of disease.

"There will not be complete success until means are discovered for training and enlisting every medical practitioner as a medical officer of health in the circle of his private or public practice and of securing his services not only in the early and prompt detection of disease, but also in the systematic supervision during health of the families under his care, and in advising them as to habits or methods of life which are inimical to health."

Speaking of the Insurance Act in the same chapter the author makes the following comments: "The creation of these independent committees was one of the greatest blunders of the National Insurance Act which was conceived ill-advisedly, had too short a gestation, and suffered a premature and forced delivery; and we may hope that ere long it may be replaced entirely. on its medical and hygienic side, by a rapid extension of the medical activities of the public health service which will conduce to the welfare of the whole nation." He further states, "What is most urgently needed is a national medical service which will give for all who cannot afford them hospital treatment and the services of consultants and of scientific aids to diagnosis and treatment whenever required; and whih will provide nurses during illness treated at home, when this is asked for by the doctor in attendance."

Chapter two considers the historical development of public health policy in England and here again is emphasized the fact that until every medical practitioner is trained to investigate each case of illness from a preventive as well as from what is often rather a pharmaceutical than a really curative standpoint, until a communal system of consultant and hospital services independent of any insurance system is made available for all needing it, and until every medical practitioner is related by financial and official ties to this communal system, full control over disease,—to the extent of our present available medical knowledge,—will not be secured.

The third lecture, entitled "The Increasing Socialization of Medicine", should be read to every medical practitioner. The great value of the hospital from the standpoint of preventive medicine is shown and the author states that the most urgent need is the provision of skilled hospital attendance for every patient who can be more satisfactorily treated in the hospital than at home.

One paragraph which it would be well if every legislator of the country would read is as follows: "Any service provided will need to be kept free from political pull. This spells inefficiency; and inefficiency means disease and death. Political pull, although not in the official list of Causes of Death is among the most potent causes of excessive mortality * * *."

In chapter four is considered the question of insurance and health, and it may be summed up in the author's advice in regard to sickness insurance: "the prior necessity for the State to secure a completely satisfactory system of public medical care before engaging in the more difficult task of providing monetary payments in sickness."

Chapter five deals with public health problems of the immediate future, and in chapter six are considered coordination and co-operation of all the various groups interested in physical, social and economic condition.

Obstacles and ideals of health progress are outlined in the next chapter. In his lecture on Poverty which constitutes chapter eight the author lays emphasis on the fact that poverty is many times seondary to illness, and as he states elsewhere in the book, "Poverty and disease work in a vicious circle in which cause and effect often change places."

Chapter nine contains the substance of two lectures, considering the causation of tuberculosis and measures for its control. The final chapter of the book deals with the history of child welfare work in England.

Considered in its entirety this book constitutes one of the most valuable addition to the literature of public health. At this time when legislative bodies are contemplating the enactment of laws affecting the medical profession it would be well for all concerned to study Newsholme's conclusions and the facts leading to such conclusions, so that hastily and poorly considered statutes will not be enacted.

Dermatology. By Walter James Highman, M.D., of the New York Postgraduate Medical School, etc., etc. Cloth, 482 pages, New York: The Macmillan Company, 1921.

The Macmillans are getting into the desirable habit of publishing books on special subjects, especially designed for the use of the general practitioner. Too many of our books are good only for reference and are written, it would seem, to enable the author to demonstrate to his fellow specialists that he knows his subject and all the literature thereon.

Highman pays little heed to other dermatologists, realizing that a book on dermatology, to be of value, must be written so that the general practitioner who runs may read. Highman has long commanded the admiration and respect of the men who know him, for his erudition, independence and frank outspokenness.

Worshipping at the shrines of so-called dermatological leaders has not been an Highmanian characteristic. He does a bit of leading on his own account and this fact is especially noticeable in his book. The medical man who practises general medicine and desires to learn how to diagnose and treat skin diseases will do well to study this work. He will get just what he wants. If he prefers to learn Dr. X's observations on epidermophytia inguinalis plus those of Dr. Q, Dr. Y and Dr. Z, he should purchase X's book and study the constitution of the mutual admiration society, composed of X, Q, Y and Z. Highman's observations are his own and they cover the entire range of dermatological conditions from acne to zoster.

The book is divided into sections—general considerations, pure dermatoses, parasitic diseases and infections, neoplasms and nevi, diseases of the organs of the skin and of the mucous membrane, and syphilis.

In turn these sections are divided into groups, which are further subdivided into chapters.

The arrangement is novel, the text enlightening, the pictures illuminating and the ensemble the bromidic last word.

To him who would know cutaneous medicine, we commend this book, because it is different and also because it is the best treatise for the practitioner on the subject that has appeared in a long time.

The Control of Sex Infections. By J. Bayard Clark, M.D., New York, Sometime Major, Medical Corps, U. S. Army: 132 pages, New York: Macmillan Co., 1921.

Too long has the subject of sex been neglected in respectable circles in this country. While we have been like the ostrich and hidden our respectable heads in the sands of prudishness sexual disease has swept on with ever increasing ferocity. Thinking men knew this, but the public at large remained ignorant of it. It was not until the United States went into the war that the full enormity of this subject was more broadly realized: sexual diseases taking first place among all the infectious conditions which came to the attention of the Army medical officers. When it was found that practically one out of eighteen of our young men were rendered unfit for immediate service on account of of sexual infections, unthinking men and women began to think, and the scales fell from the eyes of those who had hitherto been blind. As a result, these conditions are beginning to be discussed among intelligent people, because men and women realize that the evils attending them should be prevented and that innocent women and children should no longer be made to suffer for the sins of an ostensibly virtuous society.

Dr. Clark has performed a remarkable service in opening the door into the inner chamber where this skeleton has been kept. In clear and unmistakable terms the issue is faced and talked out. The author makes very plain the kind of minds which treat the high matter of sex with levity. And he measures the moral level of those who seeing in this subject something to be avoided as indecent, draw their "virtuous" robes about them and hurry on.

The author has left no doubts as to the grave responsibility resting on parents, and the futility of deceiving the young in maintaining silence on this vital subject of sex. He has left no doubt as to the obligation of the physician to society, nor the folly of reforms which attempt to regulate sexual morality by repressive laws. On these subjects he has been very concise. We venture to say that no one can read this book without profit to himself, nor society at large, if he have the interest of his fellowmen at heart.

Not only is the author an advocate of universal training of all young men, but he would also see the young women of the country made physically fit, thus preparing them both physically and economically for the high state of wife-hood and mother-hood.

As we have suggested, this book treats a delicate subject in an altogether new manner. Interwoven as it is with the facts which are the basis of community health and happiness. We commend it to every man and woman who thinks, and we are positive that if its teachings were adopted the doom of sex infections would be pronounced.

Practical Massage and Corrective Exercises. By Hartvig Nissen, Boston. Philadelphia, F. A. Davis Co., 1920.

This is a book of service to the practitioner in that it explains the various positions and movements in massage for the various parts of the body. With this knowledge the physician can either do his own massage work or, better direct the treatment of patients under his own care.

The author's descriptions of the various motions and also of active exercises are very concise, but when he begins to deal with the treatment of disease the reader must immediately be on his guard. There is no doubt of the actual curative powers in certain conditions; indeed, he has quoted many cases, but there are some instances where we must not be misled by the author's enthusiasm. For instance, most of us would hesitate to undergo massage treatment, no matter how gentle, with a double mitral lesion, accompanied by "great shortness of breath and painful palpitation; a great deal of subcutaneous effusion in the lower extremities and also considerable effusion in the peritoneum, and cyanosis."

Massage and Exercises Combined. By Albrecht Jensen. New York: Brooks and Porter, 1920.

A well made up book containing what is practically a home course in physical culture. The author in an early chapter opposes the use of strenuous exercises and heavy weights to produce health and muscle, as is ordinarily done by those frequenting gymnasiums, and suggests a means of obtaining better physical results, without apparatus, by merely spending about fifteen minutes morning and night in the systematic use of his exercises

All movements, which are combined with self massage, are completely described and elaborately illustrated with photographic plates.

Following these exercises constantly would no doubt do much to promote the general body nutrition and prevent disease, which is, after all, our greatest aim.

Heart Affections. By S. Calvin Smith, M.D., of the University of Pennsylvania, 440 pages, Philadelphia: F. A. Davis Co., 1920.

The purpose of this book is to aid the physician in recognizing and treating cardiac conditions. The author realized the necessity of producing a short, pithy book on a most important subject and he has been able to carry out this idea religiously. His text matter is aided greatly by excellent photographs of various instruments of precision, and of cardiac conditions. The subject is well presented and excellently carried out and the book is one of real value.

Practical Physiology. By Russell Burton-Opitz, M.D., of Columbia University, 238 pages, Philadelphia and London: W. B. Saunders Co., 1920.

This is a work containing advance lessons in the practical part of physiology, and is really preliminary to the student's clinical work. It enables the student to properly carry out experiments in physiology, which will give him a better groundwork for understanding how to apply his clinical knowledge. The author believes that the student should be made to "physiologize" more definitely than he does and he helps him to do that very thing. The student of medicine will find herein a tremendous amount of knowledge in a very short space and, after going over the text, it is hard to imagine how a student can get along without it.

Pharmaceutical Bacteriology. By Albert Schneider, M.D., of the University of Nebraska, 441 pages, Philadelphia: P. Blakiston's Son & Co., 1920.

The second edition of this book contains many features which did not appear in the first edition and has new chapters on the origin of bacteria, symbiology, zymology, and adenology. There have been sufficient advances in the subject during the past few years to make a new edition quite necessary and the author has taken advantage thereof to improve very materially upon his first presentation of the subject. A useful and thoroughly prctical book is the result.

Surgical Clinics of Chicago. Volume IV, Numbers 5 and 6. (October and December, 1920). Philadelphia and London: W. B. Saunders Company, 1920.

The man who does surgical work and fails to read these clinics is missing a rare treat. They are full of meat and give one at a glance the last words in the science of surgery.

Correspondence

Concerning the Institute.

An eminent New York internist and medical teacher has thus written us regarding the Life Extension article in the February issue:

To the Editor of THE MEDICAL TIMES:

Concerning your remarks upon the "Life Extension Institute" in your last issue, I had always had reason to believe that it was devised under the auspices of the life insurance companies. As is well known the span of life has become markedly shortened after 50, so that unless those insured should live longer so that they would pay more premiums, the tables of expectation of life being based upon the longevity of many years ago, the margin of profits of the insurance companies would be markedly diminished or wiped out altogether, even after exhausting all their devices to avoid payment of death claims.

In order to obtain an income from the "Institute" the officers have induced some corporations to have their employees, actual or prospective, submit to the taking of their horoscopes, for the information of said corporations. This is interesting from the viewpoint of professional confidence. But life insurance companies were never very scrupulous concerning professional relations.

Yet the Life Extension Institute has some advantages. Some of the "horoscopes" submitted to me have been the source of amusement as they would be to any experienced clinician with a sense of humor. They do not seem to be of any scientific value.

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the condition is very often corrected immediately, for the reason that Mellin's Food helps materially in the digestion of cow's milk. In cases where the condition has persisted for some time, simple changes in the proportion of Mellin's Food, milk and water will soon bring about normal stools.

Practical suggestions relative to the readjustment of the diet are set forth clearly in the chapter on "Stools" in our book, "Formulas for Infant Feeding." We also have a pamphlet devoted particularly to the subject, and all of this literature will be sent to any physician upon request.

Mellin's Food Company, **Boston, Mass.**

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Epithelialization Under Vosburgh's Method of Strapping.

Dr. Seth M. Milliken presented to the New York Surgical Society a man who was admitted to the Lincoln Hospital after a steam burn which burned off the posterior one-half of his scalp, an area on his shoulder, over the scapula and under the arm. Doctor Milliken said he saw the patient for the first time when he came on service at the Lincoln Hospital on February 1st. At that time large areas of sloughing had occurred. The sloughing area on the patient's head was a little larger than his hand. The area over the scapula was about 4 by 7 inches in extent. He had a burn over the olecranon and under the arm. Exuberant granulations were heaped up in these areas.

Doctor Hitzrot, some time ago, had shown a case in which following a burn he had done a skin transplant on the scalp and it seemed that in this case it would be necessary to follow such a procedure. It was then decided to try Vosburgh's method of strapping Small grafts were taken off the chest and arm for this purpose, and nothing had been done except to pull the margins of the wounds towards each other. The last graft was put on by the house surgeon a week before.

The advantage of Vosburgh's method of strapping was that there was less cicatrization than by any other method; the results were much better than by the application of boric ointment or any other form of treatment. The edges of the wound were gently approximated and then adhesive plaster was applied tightly to hold the granulations as flat as possible. This kept the surface in good condition. Nothing else was done in this case except to apply the grafts and strap the granulations absolutely flat.

Dr. Royal Whitman said that the use of adhesive plaster strapping for the purpose of levelling the granulating surface of an ulcer and approximating the margins of the skin was a very old treatment, as was its use in connection with skin grafting of the Reverdin type. Doctor Vosburgh had apparently revived and improved a method that had fallen into disuse.

Dr. Howard Lilienthal said he felt pretty sure that this was not a rediscovery, as Doctor Whitman said, because there was no such thing as F. O. adhesive plaster in those days to which Doctor Whitman referred. He felt quite sure of this, because he had introduced F. O. adhesive plaster himself. It was an improvement on a European plaster. Before that time they used a lead plaster which was used with the idea that it was protective and also to draw the wound edges together. Doctor Lilienthal said that as he understood the Vosburgh method the grafts were glued to the plaster and then the plaster applied, so as to hold the grafts on to the granulations. The plaster did not pull, but was simply a dressing laid on. At the same time, Doctor Lilienthal said he would like to mention another method that was extremely valuable. It was not original with him and he did not know who had originated it. It was a method of grafting infected granulating wounds by first using the Carrel method and getting the granulating surface perfectly germ free and then laying on the graft with a paraffine mosquito-net dressing. Dakin's solution was then applied as a wet gauze dressing once a day. The original paraffine mosquito-net dressing was allowed to remain for ten days. By that method every graft would take if there were no bacteria in the wound. This was better than the Vosburgh method, though he also approved of that.

Dr. H. M. H. Lyle said that in 1915 and 1916 they had used sometimes rubber and sometimes open-mesh material and paraffine as the routine treatment in extensive burns. This method was very satisfactory; with it one might expect almost 100 per cent. of successes.

Doctor Milliken said that zinc oxide plaster was sterile and protective, and if put on firmly kept down granulations and the marginal epithelium formed more rapidly. All he did was to put the graft either on the adhesive plaster or on the granulations and press it down firmly. The new epithelium advanced very rapidly and the zinc oxide kept the surface moist and smooth.—(*Annals Surg.*, Sept., 1920.)

Ether Injections in Whooping Cough.

In France, ether injections in the treatment of whooping cough appears to be the treatment of choice, that is, in certain quarters. Weil and Dupur, who introduced it in 1914, claim remarkable cures, while others have recorded complete failures, but the failures may be due to faulty diagnosis. The whooping accompanies each fit in the whooping cough and is prolonged and typical, while with adenoid congestion it only accompanies a few fits of coughing, is short and hoarse in character and "leaves a doubt in the mind." Up to the age of eight years a dose of 1 c.c. is sufficient; in other children 2 c.c. are injected. The injections are made every second day; and broncho-pneumonic complications are not a contra-indication to the injections.—(*Med. Press.*)

MEAD JOHNSON & CO. MEAD'S D-M DEXTRI-MALTOSE EVANSVILLE, IND.

Infant Feeding Diet Materials

Mead's DEXTRI-MALTOSE

Individual infant feeding requires attention—to food salts—to carbohydrates—to proteids—to fats.

Dextri-Maltose is Malt Sugar (Dextrins and Maltose) supplied to the physician in packages that contain different food salts to suit different feeding conditions.

Cow's milk modified with the proper form of "D-M" and water gives gratifying results in most cases of bottle feeding.

Write for any of these interesting pieces of literature.

"Food Salts in Infant Feeding"
"Very Young Infants"
"Key for Modifying Cow's Milk"
"Slide Feeding Scale"
"Diets for Older Children"
"Instructions for Expectant Mothers"

No. 1	No. 2	No. 3
DEXTRINS and MALTOSE with Sodium Chloride — For the average baby.	DEXTRINS and MALTOSE Plain Unsalted For the average baby. Any salt can be added.	DEXTRINS and MALTOSE with Potassium Carbonate — For the Constipated Baby.

FREQUENT Visits to the Doctor's Office where the baby is weighed and where an individual formula is prescribed is far more satisfactory than to have the mother follow printed instructions on a label—that is why directions are left off the "D-M" package.

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A Non-Poisonous, Unirritating Antiseptic Solution

Agreeable and satisfactory alike to the Physician, Surgeon, Nurse and Patient. Listerine has a wide field of usefulness and its unvarying quality assures like results under like conditions.

As a wash and dressing for wounds
As a deodorizing, antiseptic lotion
As a gargle, spray or douche
As a mouth-wash-dentifrice

Operative or accidental wounds heal rapidly under a Listerine dressing, as its action does not interfere with the natural reparative processes.

The freedom of Listerine from possibility of poisonous effect is a distinct advantage, and especially so when the preparation is prescribed for employment in the home.

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Doctor: That Winter "Cold"

Is responsible for more bronchial affections and general systemic infections than is generally realized.

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RHINOL is unsurpassed in all conditions of the Nose and Throat.

Use RHINOL in severe tonsilitis, Diptheria, etc., and watch the results.

Used by a large number of Nose and Throat Specialists. Literature on request. Price $3.00, with insufflator.

RHINOL COMPANY, Inc.

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Nativity and Color in Relation to Delinquency Among Women.

The Bureau of Social Hygiene of New York, has made public a partial summary of the chapters dealing with "Nativity and Color in Relation to Delinquency," in the book just published by the Bureau, entitled, "A Study of Women Delinquents in New York State," by Mabel R. Fernald, Mary H. S. Hayes, and Almena Dawley.

"In summarizing the relationship between nativity and delinquency, there are several points which stand out clearly. The first of these is that the foreign white group of delinquents studied from New York City is in much smaller proportion to the total group of delinquents than are the foreign white females over fifteen in New York City to the general female population over fifteen. That is, one might conclude, the foreign white in New York City are less likely to come into conflict with the law than either the native white or native colored.

"Secondly, a consideration of present age shows that the foreign born are markedly older than the native white or native colored.

"The nature of the present offense is more serious among the foreign born than among the native white or native colored, since the one has 33.7 per cent. of its offenders felons, while the other two have 13.9 per cent. and 19.4 per cent. felons, respectively. Though the foreign born have their highest percentage in the offenses against chastity group, as have the native white and native colored, this percentage among the foreign born is considerably less than within the other groups. On the other hand, the offenders against property rights have their largest proportion in the foreign born group, though in each nativity group this class of delinquents has second place.

"A comparison of the extent of delinquency among the three nativity groups shows that there is a tendency for the native colored to have more convictions than the native white, but that there is no demonstrable difference between the mean number of convictions for the native white and total foreign born groups. Due to the weight of the native colored in the total native born group, there is a possible slight tendency for the total native born to have a larger mean number of convictions than the total foreign born.

"Passing from the number of convictions to the more general view of the percentage of recidivists and first offenders, we find that only 47.7 per cent. of the total foreign born are recidivists, while 55.1 per cent. of the native white and 69.4 per cent. of the native colored have had previous convictions. That is, in addition to being less likely to come into conflict with the law at all, there seems to be a slight tendency for the foreign born who get into the courts not to repeat their offenses, though lack of information concerning the early criminal record of the foreign group may operate in this connection also."

In regard to factors in early home conditions, the book says:

"There stands out most clearly the fact that the large part of the women have come from poor homes, and that a large percentage come from families with defective strains."

There Are Many Ways of Terminating the Cat's Existence.

Protracted compression of the windpipe is only one of them. Many physicians regard under-oxydation as a condition that must be physicked, stimulated and metabolized out of existence.

It doesn't generally occur to the majority of us that perhaps the best way to cure the condition would be to remove its cause.

One very important cause for under-oxydation troubles is improperly prepared food. Food cooked in animal fats is quite likely to cause gastric and intestinal fermentation. And fermentation, in turn, leads to the absorption of toxic products of decomposition from the alimentary canal.

The use of a pure vegetable oil, such as Mazola, tends to overcome a large measure of this trouble—especially with rheumatics, nephritics, diabetics, and blood tension cases.

For Mazola, being a vegetable oil, already fluidified, is more readily absorbed than is an animal fat, which must be chnged into a fluid before it can be taken up.

Also, in cooking with Mazola, a much higher degree of heat can can be used than with animal fats—which smoke at a relatively low temperature—thus producing acrolein, or acrylic aldehyde—a substance intensely irritating to the intestinal mucosa.

By reason of the higher degree of heat used in cooking with Mazola, the absorption of fat into the substance of the food is greatly reduced. The surfaces of the meat, fish or other food are seared over, the juices are held in, and the food is rendered more digestible.

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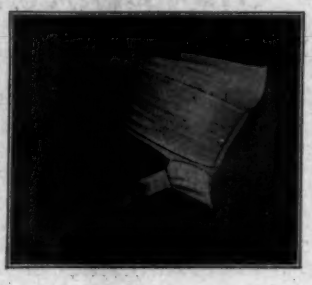

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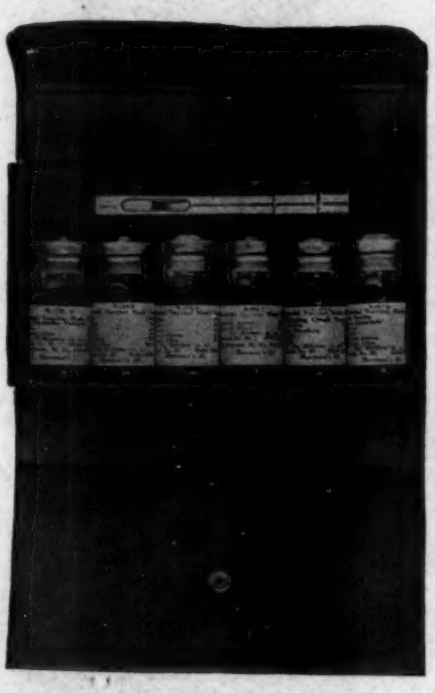

SHERMAN'S VACCINE CASE

The best immunizing response in Pneumonia is obtained during the first twenty-four hours after the initial chill. Every hour being vitally important, successful immunologist make inoculations in Respiratory Infections at their first call.

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Your dealer will be pleased to supply you.

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Largest Producer of Stock and Autogenous Vaccines

Loss of Pupillary Reflexes Not Conditioned by Lues.

Bumke, in the second edition of his work on disturbances of the pupil, sums up his experience in several thousand cases by stating that he had never observed true loss of pupillary reflexes except where there was tabes, paralysis, or brain or constitutional syphilis. Nonne has communicated two case histories which support the view that pupillary disturbances of this nature may arise in alcoholics, and Biermann and Westphal have published cases seeming to prove conclusively that loss of pupillary reflexes may be due to a general diseased condition resulting from diabetes. Meyer, upon the suggestion of Nissl, presented a case examined at the Heidelberg Psychiatric Clinic, in which the Argyll-Robertson phenomenon was present without any sign of lues, tabes, or paralysis.—(*Neurol. Centralbl.*, April 16, 1918.)

A laborer fifty-one years old, twenty-three years ago had fallen from a ladder and as a result of brain concussion lay for some days unconscious. He was judged to be two-thirds disabled and received compensation to that extent, the diagnosis being typical traumatic neurosis. When he came to the Heidelberg clinic for examination he presented the typical picture of this disorder. Upon examination the eyes showed no direct signs of injury. The pupils were contracted and unequal, the diameter of the right being 2.0 mm. and the left 1.5 mm.; absence of reflexes to light, very perceptible reflex in convergence. When homatropin and cocain were dropped into the eyes there was only imperfect dilation; opacity of lens on both sides; lamellar cataract could not be determined because of the contraction of the pupils; fundus oculi was normal on both sides; acuteness of vision not greatly diminished so that any considerable disturbance owing to deep-lying disease in the opticus could not be assumed. Wassermann in blood and spinal fluid were negative. No certain case of bilateral loss of pupillary reflexes due to trauma is known. The case seems to be an inexplicable rarity unless a bilateral benumbing of the reflexes be assumed, due to a neuritis of the opticus of unknown etiology, and this, from the manner in which the pupillary disturbance developed, seems improbable.—(*Jour. Nevr. & Ment. Fis.*)

Tellurium a Hazard in Industry.

A preliminary account appears in the *Public Health Reports* for April 16, 1920, of the importance of Tellurium as a health hazard in industry. The report is prepared by Marvin D. Shie, M.D., assistant surgeon, and Forrest E. Deeds, scientific assistant, United States Public Health Service. The effects of tellurium are thus summarized:

The tellurium poisoning encountered thus far in industry has not been severe. The primary effects are suppression of the sweat, of the saliva, and of the acid in the gastric juice. This leads to a dry, itching skin, dry mouth, metallic taste, anorexia, nausea, vomiting, indigestion and constipation. Somnolence is often a prominent symptom. The earliest symptom of tellurium absorption is the garlic odor to the secretions and excretions due to methyl telluride. Secondary effects to be expected are impaired nutrition with emaciation and where the workers are exposed to high temperatures, increased susceptibility to heat exhaustion.

The diagnosis of tellurium poisoning may be made from the garlic odor of the excretions, the suppression of the sweat, the dryness of the mouth, and the demonstration of tellurium in the urine or feces.

The preventive measures are similar to those used for other metallic poisons and may be summed up as good working conditions and proper personal hygiene.

In treatment, of course, the most important measure is the removal of cause. After that pilocarpin may be used to counteract the effect of the tellurium; the avenues of elimination should be opened and excretion favored by promoting secretions, diuresis, and free bowel movements. Hydrochloric acid may be administered to reemdy the deficiency of acid secretion. The remainder of the treatment is symptomatic. The prognosis so far has been good, the condition gradually improving upon prompt removal of the cause.—(*Mod. Med.*, Sept., 1920.)

A Diagnostic Point

In nephritis, arterial tension rises for some time before arterio-sclerosis shows itself—a clinical observation that preceded the introduction of the sphygmomanometer by many years. Similarly, in nephritis the heart is affected before there are any signs of cardiac hypertrophy. This heart "irritability" shows itself by shortness of breath, palpitation, precordial distress and night starts on the subjective side, and by arrhythmia on the objective side. These are functional disturbances, and they subside before any structural changes take place if renal adequacy is restored within reasonable time.—(*Practitioner.*)

In the Prevention of Many Infectious Ills

ORAL disinfection is now recognized as a detail of first importance. Many and various are the antiseptic measures that have been recommended for destroying germs that are often found in the mouth. To prove of maximum service, however, an oral disinfectant must not only be effective, but so easy and convenient to use that it can be employed by any one at any time and under any and all conditions.

Such an oral disinfectant is

Formamint

All that is necessary is to place a tablet in the mouth and allow it to slowly dissolve in the natural secretions. Thus its antiseptic effect can be maintained for a long period—even continuously if desired—with none of the inconvenience or difficulties entailed by gargles, sprays or solutions generally.

The widespread use of Formamint Tablets readily indicates the extent to which medical men have come to appreciate their advantages for disinfecting the mouth.

Liberal samples will be sent to physicians on request.

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In Medical Circles

it has gradually but surely become an established belief that quality is a fundamental asset, that it pays — and pays well — to use the best. In other words, that the time and effort employed in specifically ordering a product that has been shown to be the most effective and dependable of its class — and in making sure that it is the one dispensed by the druggist and actually used by the patient — is time and effort well spent.

No product better exemplifies the foregoing than Dioxogen. As the best known and most widely used peroxide of hydrogen,

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holds the place it does to-day in the regard of medical men, by sheer force of merit—and the following advantages—

In purity and oxygen-liberating power, Dioxogen exceeds U.S. Phar. standards for H_2O_2 by 25%.

Dioxogen is odorless, almost tasteless, and entirely free from acids and acetanilid. It is also colorless and does not stain the skin.

Absolutely non-poisonous and non-irritating, Dioxogen is not only the most potent, but the safest and most harmless of antiseptics.

Applied to wounds, Dioxogen promptly destroys all bacteria, and stimulates the reparative processes of the tissues.

Dioxogen is the one powerful germicide at the physician's command that can be freely used anywhere and anytime without the slightest danger.

With Dioxogen possessing the qualifications it does, and assuring its users a degree of safety, efficiency and freedom from objectionable effect that no other equally potent germicide can, is it any wonder that it has become the standard antiseptic in the home, the school, the office and the factory?

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CANCER ODORS

—and the malodorous dejecta of typhoid and other intestinal cases come under the same category—
can be made materially less prejudicial to the nurse's health if you permit her to insert a tuft of "Nazeptic Wool" in each nostril before she dresses the cancer or empties the used vessel. "Nazeptic Wool" is absorbent cotton medicated with phenol, eucalyptol, methyl-salicylate and menthol; such odors, when filtered through the "Wool" during inhalation, are materially antisepticized. Samples are available.

SHARP & DOHME of Baltimore

Fiftieth Annual Meeting of the American Public Health Association.

The 50th annual meeting of the American Public Health Association will be held at New York in November, 1921. The date which is tentatively announced is November 14-18.

It is interesting to note that Dr. Stephen Smith, the founder and first president of the Association, is now entering his 99th year. He is still active and vigorous and it is expected to celebrate his approaching centennial together with the semi-centennial of the Association.

The first organization meeting of the Association was held in New York City on April 18, 1872, and that is one of the reasons for selecting New York City for the celebration of the semi-centennial. Other considerations are the convenience to foreign representatives and to Dr. Smith, who Lives in New York City; and especially a plan to conduct demonstrations of public health administrative methods in the laboratories, executive offices, garbage disposal plants, and similar centers of public health interest, in which New York City is unsurpassed.

It is expected to present in connection with the celebration a review of the progress of the various branches of public health within the last fifty years. The sectional programs will include Public Health Administration, Vital Statistics, Laboratory, Food and Drugs, Sociology, Sanitary Engineering, Industrial Hygiene, and Child Hygiene.

Polyvalent Stock Vaccines.

As introducers of mixed polyvalent stock bacterial vaccine to the medical profession, and as pioneers in their therapeutic application, we feel that we can speak with authority.

For many years we have contended that toxic offending organisms causing infections retard and inhibit immuno production. Not theory but substantial clinical experience reaffirms this truth.

Dead devitalized germs are better antigens than the live organisms causing the infection and produce immune bodies more rapidly.

PROPHYLACTIC IMMUNIZATION demonstrates this truth and Therapeutic inoculations with Sherman's polyvalent mixed vaccines is also doing so in Acute and Chronic infections.

A more adequate and rapid immunity can be established with Polyvalent vaccines than from an infection itself. SHERMAN'S POLYVALENT VACCINES rapidly stimulate the metabolism and defense of the body with a resultant prompt recovery in general acute infections.

THERAPEUTIC interpretations must rest on clinical experience.

Any information or data on request by physicians will be complied with promptly. Address Laboratories of G. H. Sherman, M.D., Detroit, U. S. A.

A Mild Winter and Its Dangers.

A mild winter with sudden turns to extreme cold brings with it a rapid and great increase in the number of respiratory troubles the physician has to treat, from the ordinary "cold" to the more deep-seated catarrhs, bronchitis, pleurisy and pneumonia.

Of considerable interest is, therefore, the timely announcement, just made by Schering & Glatz, Inc., that they will in future supply, under the designations "Creosote Carbonate, S. & G." and "Guaiacol Carbonate, S. & G." U. S. A. Made products of the same high standard which distinguished the imported products "Creosotal" and "Duotal", of which they were the original and sole distributors for many years.

Both products are obtainable through the Drug Trade, or, if physicians are not promptly and satisfactorily served, direct from Schering & Glatz, Inc., 150 Maiden Lane, New York.

Malarial Disease.

Malarial affections with hepatic complications are markedly benefited by the cholagogue effect of Chionia. The activity of the liver is increased, without, however, the depressing catharsis that makes other stimulants objectionable. One to two teaspoonfuls in water, three times a day, is an effective dosage.

No Depression Afterwards.

The results that follow the use of Prunoids in the treatment of constipation are natural and prolonged with gratifying absense of the disagreeable griping and reactionary depression that so often attend the use of laxatives and cathartics.

OLD FORT COMFORT INN, PIERMONT-ON-HUDSON, NEW YORK

Physicians who have convalescent patients are invited to look into the attractions offered by Old Fort Comfort Inn, 25 miles from New York and reached by Erie Railroad, West 23rd Street and Chambers Street Ferry and Hudson Tube stations, also by motor via Dyckman and Fort Lee Ferry and ferry from Tarrytown to Nyack.

The Inn combines the charm of a retired location with all the comforts of modern improvements.

The sleeping rooms are sunny and airy. The sun parlor with fountain and filled with growing plants and vines, is a delightful spot.

Lovers of water sports appreciate the resort as it is on the widest sweep of the Hudson. The sandy bottom makes bathing and boating safe and pleasant. Tennis, billiard rooms, bowling alleys and music room are provided. The walks and drives to historic scenes in the vicinity are a constant source of delight.

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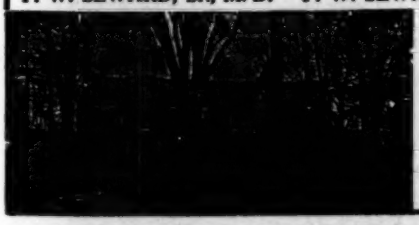

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The buildings are modern, situated in spacious and attractive grounds, commanding superb views of Long Island Sound and surrounding hill country. The accommodations, table, attendance, nursing and all appointments are first-class in every respect. The purpose of the Institution is to give proper medical care and the special attention needed in each individual case. 50 minutes from Grand Central Station. For terms and illustrated booklet, address

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Cork Prisoners' Diet.

The London *Times* gives the following details as to the methods of nourishment which were employed in the case of the nine survivors of the 11 Cork hunger-strikers. They were fed at three-hour intervals with infant food. Following are the successive steps of the dietary drawn up by the prison doctors: White of one egg with a little salt and water; 8 oz. albumen water; a teaspoonful of Valentine's meat juice in 2½ oz. water; 10 oz. Benger's Formula 2 with glucose; and finally, at midnight, when all were awake, egg-flip with sherry, besides at odd times sweetened lemonade and one daily injection of cod liver oil. To-day, besides Valentine's extract, they have had again at three-hour intervals Benger's Formula 3 with rusks, Brand's essence with albumen water, and coca wine when needed as a prevention of discomfort after food.

For the Treatment of Rabies.

Only a few years ago a newspaper of national circulation engaged in an active campaign of opposition against measures taken by local authorities to control an outbreak of rabies. It denied that there was any such disease either in animals or man, asserting that it was only a product of a diseased mind, stimulated by the vaporings of quacks and humbugs. It is hard to believe that men of sufficient intelligence to operate a high-class newspaper could be so far misled as to deny the existence of a disease so distinct in its manifestations that it has been recognized from ancestral times. Yet the fact that it did happen makes it easier for us to believe that there is still a surprising amount of ignorance in regard to the disease and its treatment. The mad stone still holds by its mystery a larger remnant of its former sway than most of us think. Very firmly fixed in the minds of people as a whole is the idea that domestic animals, and more especially the dog, only go mad during "dog days" and that the rabid condition may arise spontaneously. We do not know all about rabies any more than we know all about scarlet fever and measles, but we do know enough about it to acknowledge it just as unreservedly as a disease entity as we do scarlet fever and measles. We know that once symptoms have developed there is no known cure that because of this fact it becomes one of the most important of all infections. We know too, thanks to the work of Louis Pasteur, that artificial immunity can be conferred during the incubation period. One point in regard to this specific prophylactic treatment which is not widely enough known or seriously enough considered by many physicians is that a modification of the Pasteur method has made the vaccine available to practitioners for easy administration no matter where they are located. It is no longer necessary to send a patient to a Pasteur Institute for he can have his treatment administersd at home by his family doctor without loss of time from business or daily pursuits and with greater safety and certainty of results. More information on the subject may be obtained by addressing Eli Lilly & Company, Indianapolis, Ind.

"Mid-Year" Vaccination.

Aside from the vaccinating being done as a result of the cases of Smallpox which have appeared in various parts of the country, this season of the year usually sees a large amount of vaccination. Smallpox Vaccine must be ALIVE when used, in order to be effective, and that vaccine is easily and quickly KILLED by heat. Therefore, Smallpox Vaccine should always be kept in refrigerator or other cool place until it is to be used.

The Tube-Point container possesses a number of important avantages over the ordinary capillary tube, according to a booklet on "Smallpox Vaccine" recently issued by the H. K. Mulford Company. The Tube-Point is described as "a combined scarifier and virus container". It furnishes a sterile scarifying point, no needle or other scarifier being necessary, thus avoiding delay and inconvenience.

Until it is used, the vaccine is hermetically sealed within the Tube-Point, which is made of one piece of glass, with no joints or seals to become loose and allow contamination of the virus.

The Tube-Points are described as particularly desirable for use in vaccinating children, as they suggest no cutting or surgical operation to the patient. Any physician who has not seen this Tube-Point may obtain a sample by writing to H. K. Mulford Company, Philadelphia, and mentioning this publication.

TREATMENT FOR INSOMNIA

Why Difficult In Private Practice

Fronting Central Park

The practitioner's difficulties and the possible dangers to the patient in using the so-called hypnotic or somnifacients to the point of tolerance become apparent upon consideration of the case records of an institution such as the Towns Hospital.

Whatever the primary purpose in prescribing these "harmless remedies," whether hypnotic, analgesic or sedative, the patient invariably tends to drift away from the physician's control. Having learned the name and dosage of the "harmless remedy that made me sleep," the patient may purchase it as he pleases and is thenceforth free to enter upon a course of self-prescribing.

Hundreds of the case records of this institution bear evidence that the use of morphine to the point of tolerance may be far less serious than like employment of many of the "harmless remedies" coming within the analgesic, sedative or somnific classes. However, the habitual user of morphine is invariably stigmatized. The taking of a "harmless remedy to make you sleep" is looked upon as quite respectable, no matter to what point pursued.

However, the all-important fact in this situation is this: As the patient acquires a hypnotic tolerance, the physician's chances for success in treatment are proportionately minimized. The "harmless remedy" calls for increased dosage or for recourse to some more powerful, but still "harmless," drug.

For those addicted to these "harmless drugs," this Hospital offers the same facilities as those available for other forms of narcotic toxemia. As a prerequisite to any measures for permanent relief and restoration, an effort is made to eliminate the toxemia by means of a definite medication basic to this Hospital's entire procedure.

Following the routine elimination of such toxemias, our records show that patients may be divided into two groups: those in whom the pathologic conditions were purely functional and those in whom there is a pathologic change of tissue. In the first group it is found that the insomnia disappears; in the second, the organic changes are revealed and a definite course of treatment may be more intelligently instituted.

Study of the Hospital's case records of its daily work would seem to demonstrate beyond a doubt the wisdom of its established routine as a basic procedure in treatment of insomnia.

Physicians interested in the treatment of insomnia are invited to send to the Hospital for its clinical literature. Its fund of information and data is freely available to all practitioners regardless of whether patients are referred here for treatment.

CHARLES B. TOWNS HOSPITAL

292 Central Park West - - - New York City

HAY FEVER MEMORANDA

Early Spring Type

Patients whose hay fever develops in late March, April, or beginning of May, should be tested with pollens of early flowering trees.

Late Spring Type

Patients whose hay fever develops in the latter part of May or during June should be tested with the pollens of the chief grasses, such as orchard grass, timothy, red top—and certain early flowering weeds.

ARLCO-POLLEN EXTRACTS

For *Cutaneous Tests* and *Treatment* cover early and late spring, *also summer* and *autumn.*

Literature and List of Pollens on Request

THE ARLINGTON CHEMICAL COMPANY, YONKERS NEW YORK

Adrenalin in Diagnosis.

The new science of endocrinology has developed so rapidly that, in order to remain in the vanguard of the march of progress, the physician must needs keep himself informed on every phase of glandular therapy. In harmony with this idea we have directed the attention of our readers, on several occasions, to the series of instructive essays on Adrenalin that have been appearing in the advertising section of this journal.

In the current issue we present a brief discussion of the use of Adrenalin as a diagnostic agent in hyperthyroidism and pancreatic diabetes, also as a test of suprarenal function. The technic of these tests is simplicity itself, and there would appear to be no reason why any practitioner should not avail himself of them in certain obscure cases in which a differential diagnosis by the usual means may be difficult or even baffling.

The preparation employed in making the tests is the original 1:1000 Adrenalin Chloride Solution of Parke, Davis & Co., upon the use of which for twenty years the literature of suprarenal therapy has been built up.

Analgesia After Antipyretics.

Inasmuch as the so-called antipyretic drugs produce also a distinct relief of pain in many conditions especially of a neuralgic character, it was interesting to inquire into their comparative efficiency. Accordingly, experiments were performed by David I. Macht, with the view of determining the pain threshold before and after administration of such drugs. This investigation has not yet been completed, but Macht says that here, too, a lowering of the pain threshold was observed. Several antipyretics were studied and all of them were administered by mouth. It was found that acetanilid, acetphenetidin and pramidon were especially effective in this respect. The results so far obtained indicate that the antipyretics, while not as powerful as the opiates, do also produce analgesia of the central origin, as shown by the change in the pain threshold after their administration.—(*Johns Hopkins Hospital Bulletin.*)

The known presence of a calculus in the kidney is not in itself an indication for surgical treatment; but if, in spite of general measures, (i) chronic pain or attacks of colic persist, (ii) hematuria recurs, or (iii) the urine becomes infected, operation should be advised.

The diagnosis of early mitral stenosis can only be made in the presence of a diastolic rumble. In its absence the diagnosis is not sound. There are some who hold that an impure first sound at the apex, or perhaps a reduplication or an accentuation of the first sound, with a loud pulmonary second sound, are early signs of mitral stenosis. They may be an indication for a more careful examination, but they are untrustworthy signs. Such heart sounds are frequently heard in normal over-acting hearts, but as signs of valvular disease they are not to be relied upon.—(*B. M. J.*)

The heart may or may not be enlarged in mitral stenosis. Cardiac enlargement is one of the most important signs which we possess of myocardial mischief. The ordinary methods of estimating the degree of enlargement are inexact, but for clinical purposes they are sufficiently reliable as an aid in diagnosing structural disease of the heart. It is best to take the left border of the heart, as determined by palpation and percussion, as an index of cardiac enlargement. When there is a defined impulse, unmistakably outside the nipple line, and on palpation it is felt as a thrust, it is sound to consider the heart enlarged.—(*B. M. J.*)

Hysteria is a condition in which symptoms are present which have been produced by suggestion and are curable by psychotherapy.

This definition differs from all others in not recognizing an hysterical condition apart from the presence of definite hysterical symptoms. Charcot believed that hysteria manifested itself in two ways: by the symptoms which were obvious to the patient and about which he complained, and by physical and mental stigmata which were present before the obvious symptoms appeared, and which persisted after their removal.—*A. F. Hurst.*

Syphilitic Oculo-motor Paralysis and Chronic Nephritis.

C. Madenna (*La Medicina Practica,* September 30th, 1919) reports a case of complete right oculo-motor paralysis and chronic nephritis in a man aged 46, due to unrecognized syphilis. The patient was cured within forty days by five intravenous injections on neo-arsenobenzol, the doses of which were gradually increased from 0.30 to 0.75 gram. No history of specific contagion could be obtained, but the diagnosis of syphilis was established by the general glandular enlargement, periostitis of the sternum and tibiae, a positive Wassermann reaction, and the result of treatment.